NSIT IN 1967: A YEAR OF BIG DECISIONS

JANUARY 2/9, 1967

RAILWAY AGE WEEKLY

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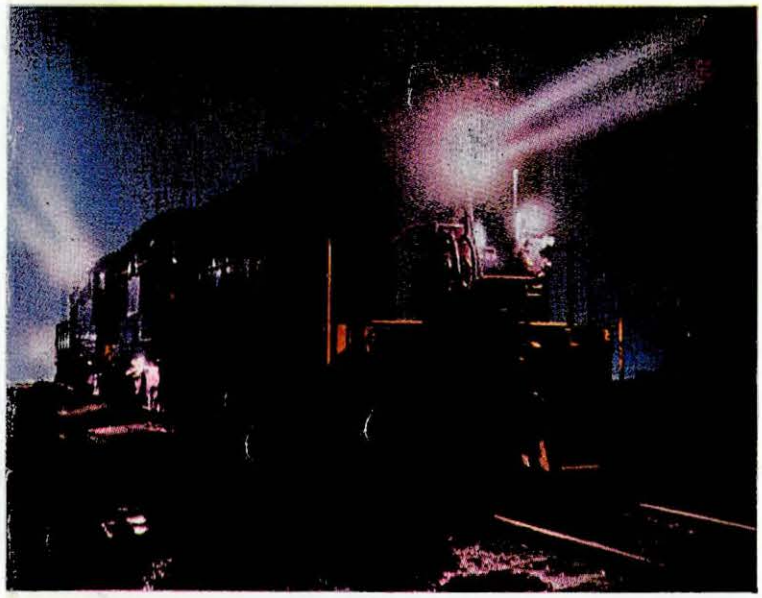

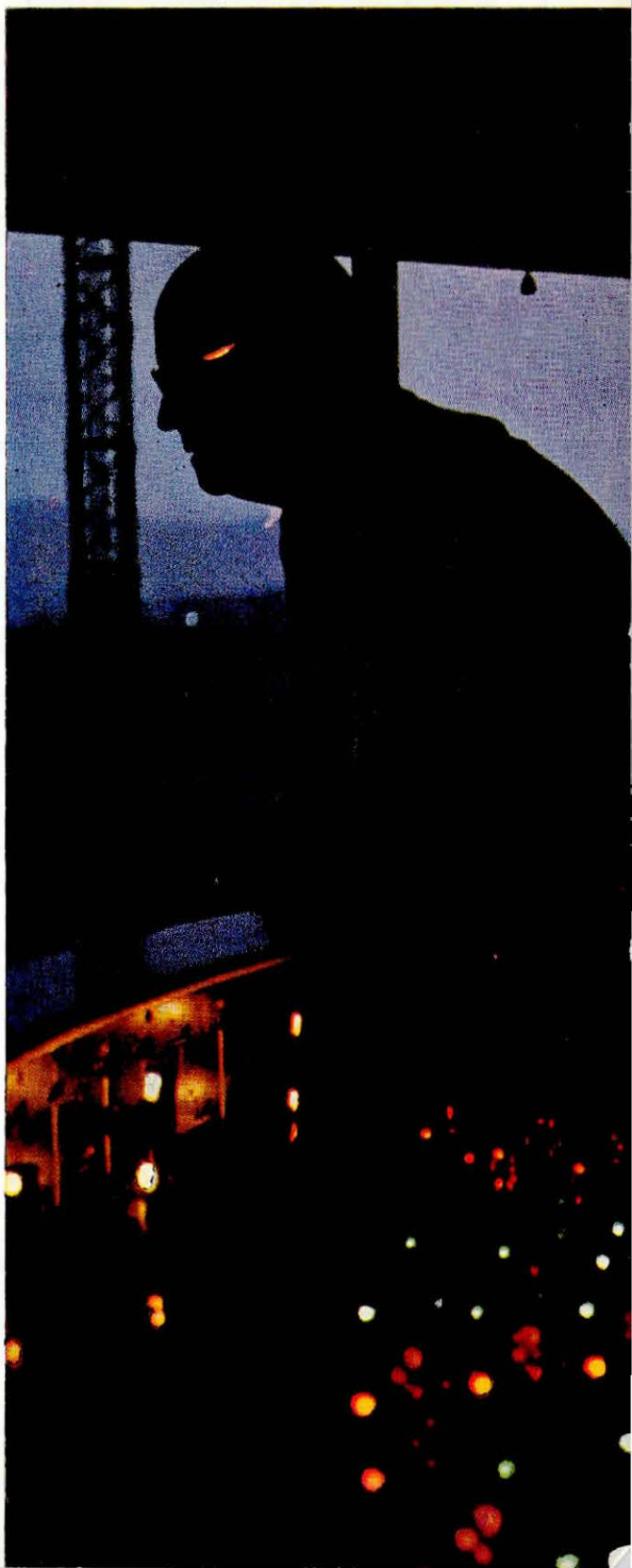

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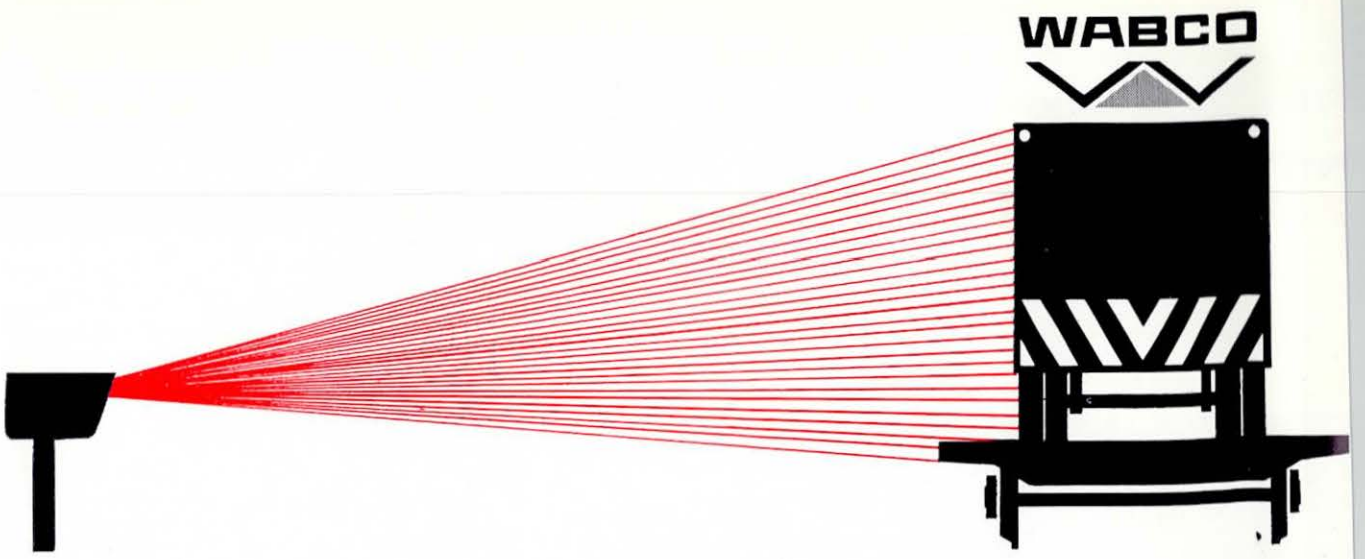
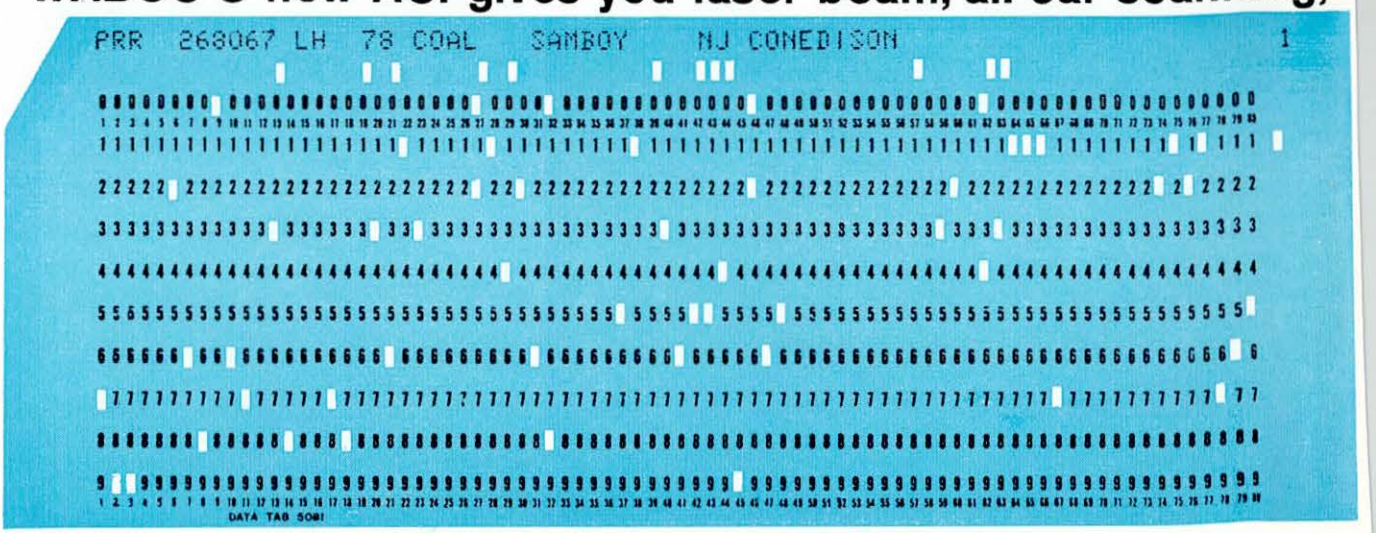


WABCO'S new ACI gives you laser beam, all-car scanning,



plus a complete information system

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RAILWAY AGE

January 2/9, 1967 • Vol. 162, No. 1

THIS WEEK

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If it takes super managers to make super railroads, Chesapeake & Ohio is on the right track.

30 SP branch helps MP cut mileage

MoPac bought an about-to-be-abandoned SP line and rebuilt it as part of a program to shorten the Ft. Worth-Houston route.

32 CTA tries new-type concrete crosstie

If tests of the Swedish-built ties work out, CTA may decide to use concrete ties in future extensions of its lines.

34 Transit P&S work to get more complex

Expanded use of data-processing equipment seems in the cards as mass-transport purchasing aims for maximum efficiency.

38 Transit turns a corner in '67

New systems are reaching the action stage at a time when an important cash source almost dried up.

46 Viewpoint: A near miss—and another try

The previous Congress didn't give the BLF&E the amendments it wanted to the Hours-of-Service Act. The fight will resume.

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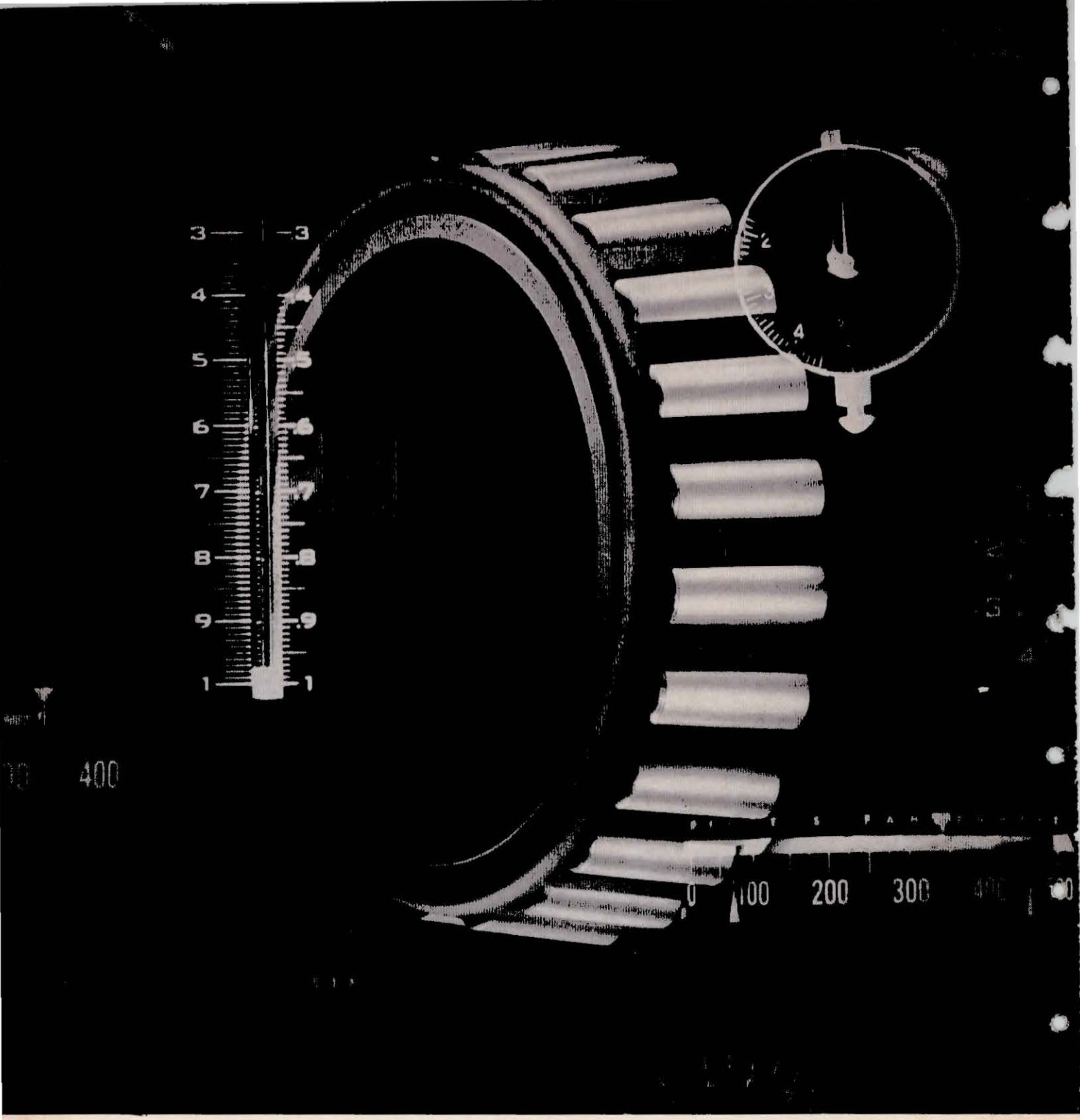

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SHORT AND SIGNIFICANT

Massive transit funds asked by Rockefeller

New York Governor Nelson Rockefeller said last week that he will ask the state legislature to approve a $2-billion "Highway-Mass Transportation-Capital Construction Bond Issue." He didn't disclose how the money would be divided—but he did say: "We must in the public interest make major capital investments in major mass transportation systems because the cost of building more super highways as an alternative would be prohibitive in money, land and public convenience." A big chunk of the bond issue, an aide said, would go for new subway and commuter cars. Gov. Rockefeller also proposed a unification of New York City's mass transportation systems, bringing the Transit Authority and the Triborough Bridge and Tunnel Authority under the control of the Metropolitan Commuter Transportation Agency (which now operates the Long Island Rail Road).

White retires from D&H; Dumaine, Hiltz elected

William White—who began his railroad career as a clerk with the Erie in 1913—stepped down from his active operating role on the Delaware & Hudson last week. He retired, effective Jan. 1, as chairman and president of the Delaware & Hudson Company, and as chairman of its subsidiary, the Delaware & Hudson Railroad Corporation. He will retain membership on the boards of both companies. Named to replace White as D&H Company chairman is Frederic C. Dumaine, Jr., former New Haven president, while John P. Hiltz, Jr., was elected president and chief executive officer of the D&H Company. Hiltz is also president and general manager of the railroad.

Port-rate controversy revived by ICC decision

The issue of whether railroad rates on export and import traffic should be different to and from the various Atlantic ports is to the fore again. It has been revived by the ICC's decision in I&S Docket No. 8125. That permits the Baltimore & Ohio and Western Maryland to establish export rates on paper and paper products moving through Baltimore which are lower than rates through other Atlantic ports, including Boston, New York, Philadelphia and Norfolk. Holding that the Baltimore roads had justified their proposal on its merits, the Commission refused to permit roads serving other ports to meet the cuts and thus keep parity. Parity came some three years ago after about 85 years of differentials in favor of the Southern tier ports. It resulted from a decision of the U.S. Supreme Court condemning an ICC order upholding the differentials. "We decline to attribute to that decision any principle of absolute equalization between ports," the Commission said in the present case.

Hamburg added to Rail-Transit Tour

The West German city of Hamburg has been added to the itinerary of Railway Age's 1967 Rail-Transit Seminar Tour of Europe (April 24-May 10). Hamburg's 45-mile rail transit system, dating from 1912, serves a population of two million. The city is considered to be a model of inter-modal transport coordination. Holland, Russia, Germany, France and Spain are the countries to be visited by the Railway Age group. In addition to Hamburg, there will be full-scale seminars and inspection trips in Rotterdam, Leningrad, Berlin and Barcelona; shorter visits are planned in Moscow and Paris. Requests for further information should be addressed to Luther Miller, Editor, Railway Age, 30 Church Street, New York, N.Y. 10007.

MONDAY MORNING REPORT

Computerized car control: A decision at hand?

Late this week, on Jan. 13, the railroad presidents sitting on the AAR board of directors may feel as though they've wandered into a Buck Rogers or Flash Gordon story-planning session. They'll be getting down to brass tacks on a widely-distributed report written by New York Central President A. E. Perlman last fall urging the industry to get going on a national computerized car control system. Perlman's recommendations lean hard on hardware and technique that has been developed in recent years. Practically all the industry's top computer experts got copies of the Perlman recommendations from Carl Byham, executive director of the AAR's Data Systems Division on Nov. 22. Experts in the industry's computer complexes feel the proposal could be the most important and ambitious project to come down the line since the industry considered —and acted upon—adoption of a standard gauge in the nineteenth century.

Stakes are enormous

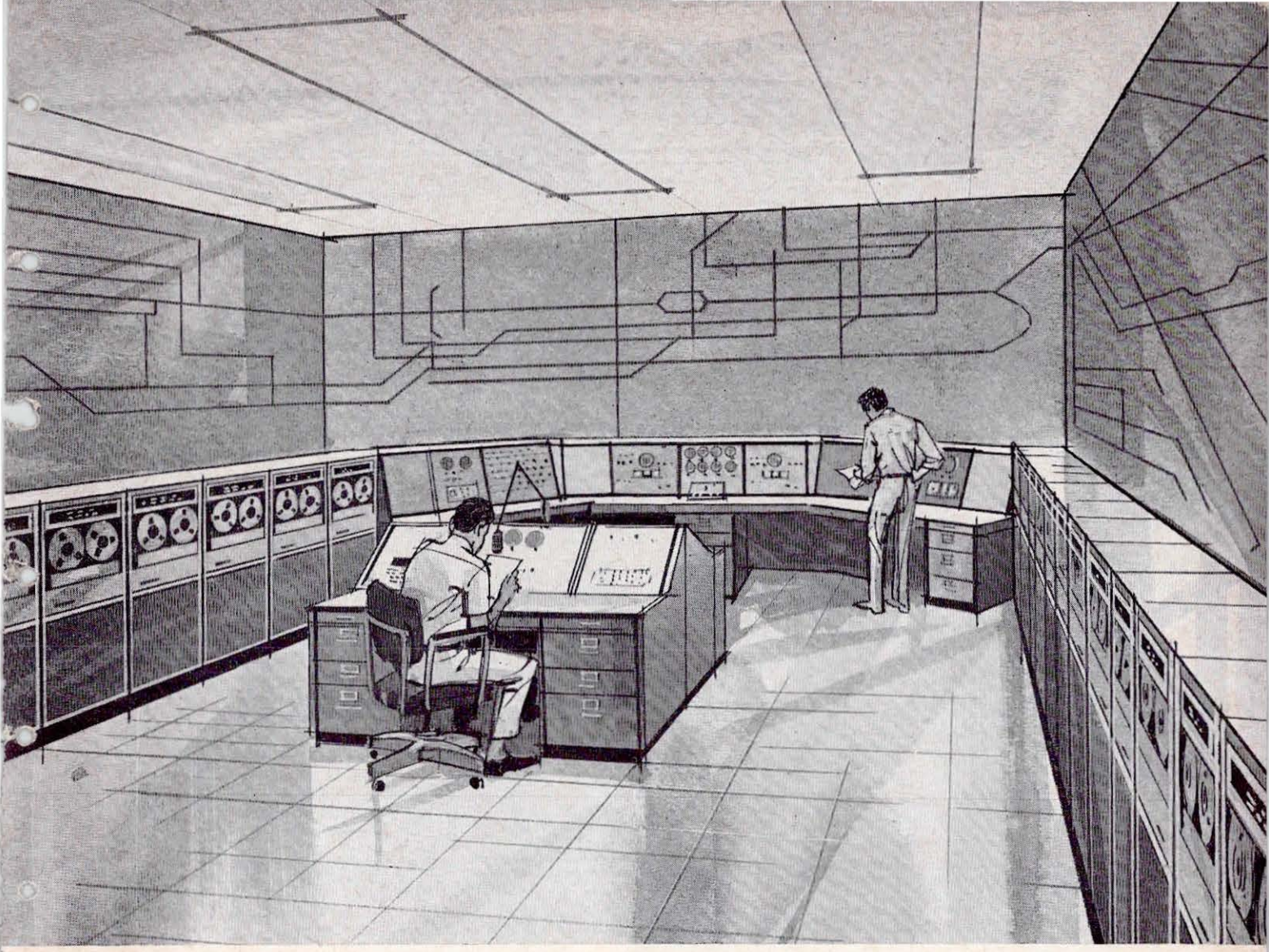
Any system that can extract an extra 5% of use from the carfleet can mean savings measured in the hundreds of millions. That fact has not escaped the attention of promoters. At least two proposals for a national car control system (one owned by the railroads and the other owned by contractors) have been proposed. With technology already here that can identify equipment, collect data and report upon such information in minutes, the industry's hesitancy to move even toward automatic identification equipment (the AAR plans to recommend adoption of a standard ACI) is rapidly changing. And the industry, say many experts, isn't about to let outside contractors control such work. In his report, Perlman insists that such work be controlled by the railroad industry.

Learning from the past, planning for the future

Perlman recommends sweeping changes in the AAR's role via establishment of a national computer center at the AAR—and some heavy headwork by the best brains in the industry to map out the campaign to control the national carfleet. Experts say Perlman's recommendations are based upon a simple and sensible concept: Railroads must take maximum advantage of car control systems already working, using AAR computers already on order. Simultaneously, a group of the industry's most talented people should plan the future course of the central system and outline studies needed to develop scientific methods for optimizing car distribution decisions and ancillary values that might be gleaned from such information as it is gathered nationally.

A working system possible in five years

Perlman's proposals will cost money. Additional staff will be required at the AAR's Data Systems Division and in the Car Service Division. Reorganization of the Data Systems Division will include expansion to embrace systems planning and design, computer programming and computer operations for the car control system. Planning considerations (not a proposal for an actual system) are outlined by Perlman as a possible approach to the development of an information system that will give the most benefit to the industry without jeopardizing any individual railroad's competitive position. Perlman's concept is to structure a three-year cycle of development within a five-year cycle—the first aimed at producing a workable national car reporting system in three years and the complete system, able to produce data and information useful to railroads for control and other purposes in five years.



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A new booklet, "The City . . . Change and Control," tells about this system approach, based on more than 60 years of GRS experience in the specialized field of transportation control.

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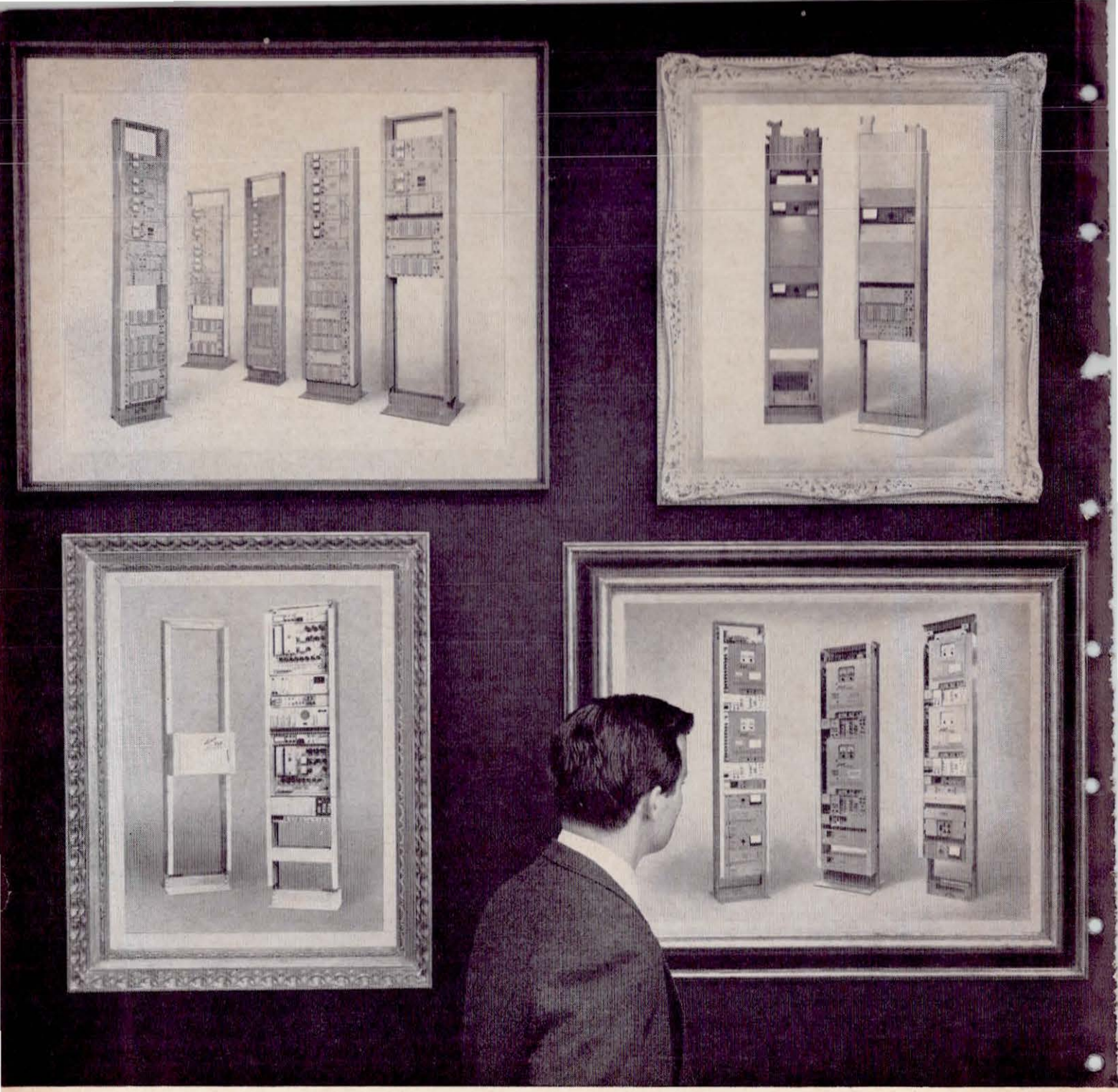

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WEEK AT A GLANCE

ICC to take another look at Northerns' merger case

The proposed Northern Lines merger "killed" by a 6-5 ICC vote last March 31, was breathed back to life last week. The ICC disclosed on Jan. 4 that it will reconsider its 1966 decision rejecting the proposal of the Great Northern, Northern Pacific and the Chicago, Burlington & Quincy to merge into a single 25,000-mile system to be known as the Great Northern, Pacific & Burlington.

The Northern Lines case will be reopened, said ICC Chairman W. H. Tucker, for further oral argument and further hearings. The additional hearings—set for March 6 in Washington—will be limited to the effect of financial and operational changes and estimated savings resulting from agreements with other railroads since the Commission's initial decision denying the merger. The oral argument, however—to be heard within 30 days of completion of the hearings—will cover issues raised by the parties in their reconsideration petition.

Tucker said an examiner's recommended decision will be omitted in the re-opened case, and that the present record "will be considered in arriving at an ultimate decision."

The petition for reconsideration was filed last July 27. The three railroads said then that they were willing to accept certain conditions requested by the Milwaukee Road and the Chicago & North Western, along with attrition conditions to protect their own employees.

The outlook: More traffic in '67 . . .

Railroad predictions that 1967 will be a year of continuing traffic gains (though at more modest rate than in '66) have now been borne out by the only people really in a position to know—shippers. For first quarter '67 the 13 Regional Shippers Advisory Boards are predicting a 5% increase in ton-miles over the corresponding period last year. Decreases are foreseen in only four of the 13 regions—Central Western, Mid-West, Pacific Coast and Pacific Northwest. The commodity breakdown shows increases expected in 30 categories and decreases foreseen in eight. The expected 5% increase in ton-miles is based upon a 1.8% increase in carloadings—from 6,155,282 cars loaded in first-quarter '66 to anticipated loadings of 6,268,997 in first quarter '67. The higher rate of increase for ton-miles takes into account heavier loads and a longer average haul.

. . . but how about the cars to move it?

Less certain is the outlook for car-fleet acquisitions in the New Year, although current predictions are somewhat rosier than they were a few weeks ago. Most optimistic forecast has come from Pullman-Standard, whose vice president and general manager, George L. Green, sees it this way: "Estimates are that 100,000 new and rebuilt cars were put in service in 1966. In 1967, the figure should approximate this same number. When it comes time to calculate whether it is more profitable to use outmoded equipment that produces little revenue—merely because the tax credit has been suspended—or to reach out for new money-making rolling stock with possible returns of 30% or more revenue, the decision to upgrade looks favorable. . . . At Pullman-Standard, we feel the future is bright."

Green's optimism is also reflected, although not specifically as related to carbuilding, by other spokesmen for the supply industry. Says Ashley Gray, chairman of the Railway Progress Institute (and president of General Steel Industries): "We have high hopes for the railway industry in the year ahead. The year just ending should set a 745 billion ton-mile freight record for the railroads . . . I believe that 1967 could again set new records. . . . The railway supply industry is entering an important new era. We are only at the beginning of the revolution in rails and the best is yet to come."

RPI President Nils Lennartson says railroads and their suppliers appear to be in for "long-range growth and prosperity," despite problems created by suspension of the 7% investment tax credit, higher labor costs and the tight money situation in the nation.

N&W readies for another round in merger fight

Still smarting after a hoped-for Christmas gift from the ICC turned out to be coal in the stocking, the Norfolk & Western last week was preparing for the next move in its complicated merger battle. The pre-Christmas disappointment to the N&W came in the form of a report Dec. 22 by ICC Commissioner Charles A. Webb on inclusion of Erie Lackawanna, Delaware & Hudson and Boston & Maine in the present N&W system.

Subject to various conditions, Webb recommended that the Commission require inclusion of E-L and D&H in the present N&W system and that inclusion of B&M would be authorized but not required. To require inclusion of B&M would be inequitable to N&W, Webb advised.

The Webb report calls for exceptions, if any, to be filed within 30 days. It is "obvious," said N&W President Herman H. Pevler, that his road will be among those filing exceptions. Deadline is Jan. 21.

While acceptance of conditions imposed by the Commission when it approved the present N&W system commits that system to taking over E-L, D&H and B&M, N&W now argues that its proposed merger with the Chesapeake & Ohio contemplates better arrangements for those three roads, and needed arrangements for Central of New Jersey and Reading, too. On Dec. 30, eight days after it served the Webb report, the Commission made public a Dec. 23 order scheduling the N&W-C&O case for initial hearing in Washington April 17 before Examiner Edward L. Boisseree. Approval of the recommendations in his report would not preclude Commission approval of N&W-C&O merger, Webb pointed out.

GUS WELTY'S LINES ON LABOR

WELTY

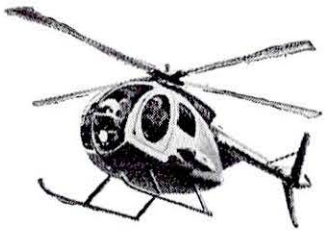
BLESS 'EM ALL, as the World War II ballad puts it—the long and the short and the tall . . . And as one year phases into another, as this effort at a management-labor commentary hits its first anniversary, it's difficult not to issue a blanket blessing on the many men—on both sides of the picture—whose counsel, advice, cajolery, confidences and criticism have gone into whatever it is that has appeared in this space. If memory serves, this weekly outpouring was conceived on the basis that (a) no other single subject touches the lives and duties of railroad men so broadly as management-labor relations do; and (b) meaningful coverage of the subject often requires something more than the bare-bones technique of straight news reporting.

THE YEAR HAS HAD its serio-comic moments —and its memorable ones. And there have been letters—some heart-warming, some just heated, and some rather poignant. What really sticks in memory are the people—they'll be remembered long after the issues are forgotten in time's march (toward new issues).

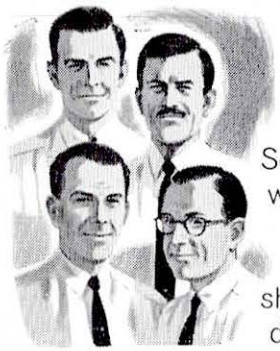
THERE ARE THOSE who say railroading today is machine-oriented—that men aren't the men they were in the old days. But that's hard to believe—particularly for anybody handling a management-labor beat. Maybe the atmosphere of potential conflict stirs men to greater expressiveness, maybe it has to do with the kind of men who choose the rough-and-tumble life of the management or union negotiator—the fact remains that many of the real personalities in railroading today are in this arena.

NOBODY, for instance, could be long with the BRT's Charley Luna without developing both a personal liking for the man and a certain awe for the way he operates. (It was, by the way, Luna who heard about President Johnson's lights-out economy wave the hard way—he tripped over a doorstep in a darkened White House—and later showed up at the WH to present LBJ with a switchman's lantern. Let there be light.) Then, there's BLF&E's Ed Gilbert—and while many people regard the union itself as a dying institution these same people hope there'll always be an Ed Gilbert and men like him in the rail labor movement. On the management side, there's the incomparable J. E. Wolfe—whose measured phrases are now familiar to millions via the work-rules dispute and television. As one union man puts it, "you could run a nationwide contest for the best story about a time Doc Wolfe opened his mouth and said anything but exactly what he meant to say — and you wouldn't have a single honest entry."

RAILROADING a world of machines, not men? Not while it's inhabited by men like these, and like their associates in the fascinating business of bargaining.



In the past you went to a lot of trouble to get your turbine drive assemblies. You explained the problem to your engineers and designers. Some of them would design the gears. Some the shafts. Others designed the shape of the box. Still others specified bearings and seals and types of steel and tolerances and everything. Then you'd run off a mountainous bunch of blue prints for the whole assembly. Then a lot of job shops would build it piece by piece. And you'd have to fit them all together.



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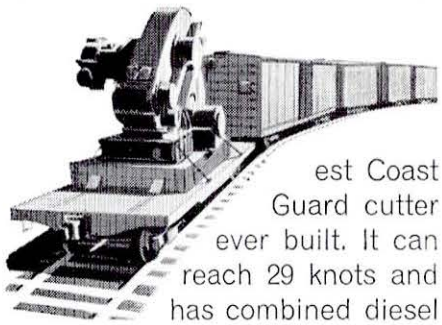

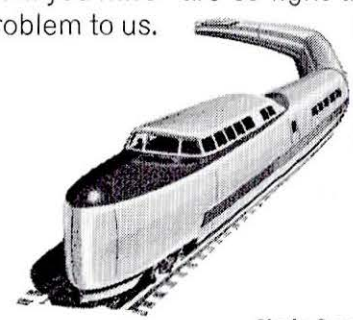

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This recently completed Type ED93 1900 KW AC electric locomotive is designed for both passenger and freight service. Primarily for main line use, Type ED93 is also suitable for branch lines — this because it's the world's first electric locomotive to adopt a completely static and stepless voltage control system (zero to full voltage) using thyristors in its power circuit.

A special effort was made in the designing stage to lower the content of higher harmonics and reduce radio interference. As a result, the adhesion characteristics have been greatly improved over other electric locomotives, and maintenance has been remarkably simplified.

Another distinctive feature is that there are no moving contact parts in the control circuit. Along with variable axle load controls, this means a snow-proof structure.

It is expected that Type ED93 will be the model on which the AC electric locomotives of the future will be based. In the meantime, write Hitachi for more information.

SPECIFICATIONS

Electric System	Single phase 20 kV 50 c/s
Weight in working order	75 t
Axle arrangement	B_0-2-B_0
One hour rating: output	1900 kW
One hour rating: traction effort (full field)	14,100 kg
One hour rating: speed	49.1 km/h
Max. speed	100 km/h

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C&O: Blueprinting a super-railroad

Is it luck—or extraordinary leadership—that makes C&O such a dazzling candidate for super-railroad status? In-depth interviews with the men who run Chessie suggest it's the latter.

BY JOHN MITROS

Royal betrothals used to create a stir like the one that went through the railroad world 16 months ago: a stir of awe, envy and a nagging suspicion in peoples' minds that the rich *will* get richer.

A startled Monon officer reacted like many railroad men (especially in the East) when he exclaimed: "My God, they've already got their hands full with Baltimore & Ohio—what the hell are they up to now?"

"They" was Chesapeake & Ohio. The date was Aug. 31, 1965. The boards of blue-chip C&O and blue-chip Norfolk & Western had just voted approval of a plan to merge.

• **What was C&O up to?** Then, as in the months since, C&O has been up to a great deal. Chessie:

—Completed refinancing B&O's debt, which gave B&O a positive working-capital position for the first time since 1961.

—Got an Interstate Commerce Commission nod to control tiny but strategic Chicago South Shore & South Bend.

—Waited for the Commission to move on a favorable examiner's report in C&O's case to control (jointly with B&O) the Western Maryland.

—Successfully petitioned the ICC for reconsideration of the order indefinitely postponing hearings on the N&W-C&O merger application (see p. 12).

—Continued to buy back the C&O shares it exchanged for the shares needed to control B&O. Chessie has reacquired almost 70% of such shares.

And there was the matter of C&O's bet on B&O's over-all future: Chessie's outlays soared toward the half-billion mark at the end of '66.

• **Nothing unusual.** C&O's men and machines also produced a lot of transportation over the 11,000-or-so miles of railroad that constitute C&O/B&O. Chessie is not waiting upon either events or merger with N&W to burnish its prospects. In '66, C&O/B&O:

—Posted combined revenues of $813,305,000, up 2.1% from 1965.

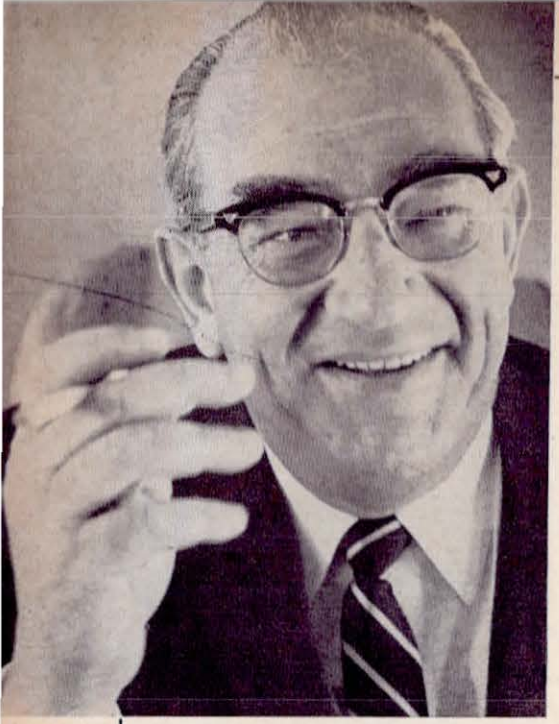
—Had combined net income of $66,084,000 or $7.61 per C&O common share, compared with the $7.45 per share earned in '65.

—Completed capital expenditures in excess of $150,000,000.

—Further developed relatively new planning and commercial-development departments, refined an already-dazzling financial reporting system, continued to restructure the roads' traffic mix and put the finishing touches on a huge new computer complex at Baltimore.

Not that '66 was an unusual year for C&O. It is just that the action on C&O is on a scale apt to awe men on smaller, less innovative (and less affluent) railroads. But railroad men, like the Monon vice president, still wonder what C&O is up to.

Obvious answers—such as appear in C&O/B&O's marvelously informative annual report—tend to be somewhat unsatisfactory. As cynics say, it's easy to be right when you're rich. C&O is one of the industry's few genuine blue-chips: it has long been blessed with strategic lines, coal and some beautiful downhill grades. Some observers think the key to Chessie's success is leadership—the road's chieftains have displayed managerial class for generations. More particularly, a few management-watchers think the answer to C&O's aggressiveness is in the road's little-noted evolution away from the militaristic rigidity of traditional railroad managerial organization. A critic describes



Gregory DeVine: 'Things do not get better left alone'

The late Walter Tuohy used to call Gregory S. DeVine "Father DeVine" when he wasn't calling him "Gregory the Great." Insiders at C&O/B&O are quick to point out that Tuohy's tags were fond, not fun.

DeVine, an early business associate and longtime friend of Tuohy's, had been with C&O only eight years when he was elected president. He was named chief executive officer of C&O/B&O last spring, when Tuohy died.

Some people in the industry thought him shy because he avoided public appearances after his election. "It was sense, not shyness," says one of his aides. "He had a lot of ground to cover and a lot of reins to grasp."

He has, by all reports, covered the ground and got the reins grasped in his large fists. He is also more willing to speak what's on his mind. He's worth listening to.

"You can't always be right," he says, talking about the evolution of C&O's views on diversification. "History is history, but today's facts have to be dealt with by people with an eye on the future. C&O/B&O have found it pays to keep the other eye on the customers' point of view.

"Ten years ago, with good reason, Kusik thought railroads were handicapped because the industry was far too removed from the major sources of technical and scientific innovation. Tuohy figured even so exotic an acquisition as a company in electronic communications could be a major step in moving a railroad closer to the flow of technological development.

"Today, real growth opportunity for our railroads is in railroading. C&O's most important growth area is in the 91% of B&O we own."

DeVine has a reputation for fairness that is reflected in the road's handling of B&O affairs: cash benefits from projects upgrading B&O are split evenly between C&O and B&O. Says DeVine, "We're going to make sure B&O suffers no loss on whatever benefits come to C&O from B&O's tax loss carry-forward, too."

Bulk handling? Unit trains? DeVine laughs. "C&O had an automatic all-steel dumping facility at Newport News back in 1914. We've handled trainloads of coal for so long we don't think it remarkable."

But he also has a basic belief in the industry's ultimate need to operate as a system: he paraphrases Tuohy's sentiments on the subject, "All railroads are an integral part of the nation's rail network. They'll stand or fall with the system. The fate of any railroad, including C&O/B&O, in the long run is tied to that of the industry."

Change? "The idea isn't change for change's sake—it's to improve, to examine railroading thoughtfully, accurately. After all, corporate disasters begin with individual mistakes of judgment, somebody playing brinkmanship with other people's money. The opposite is just as bad. Fatalism can be fatal to railroad men. Things do not get better left alone. We're trying to be strong where we have to be."

this evolution as enabling C&O's brass "to plan and scheme around the clock without having to worry about how the railroad is running." And there are those railroad men who figure Chessie is just plain lucky.

C&O men laugh at the idea of luck. Organization? They say they've not changed as much as they should have. Leadership? Chessie's men get somewhat immodest assessing the quality of the road's past and present top leadership. And they get downright derisive about the idea that money begets money —at least in the railroad business.

Pressed for some better idea of why C&O runs so hard, C&O men will usually start talking about something going on at Terminal Tower, the wedding-cake skyscraper that dominates Cleveland's lakefront skyline. Though C&O offices are scattered on various floors of 41-story Terminal Tower, the talk is usually about something going on in the upper-floor executive suites.

• **Run hard, watch pennies.** Bits and pieces of the Terminal Tower theory can be overheard in the elegant Greenbrier suite at mid-day. It's where C&O/B&O brass lunch together when they're in Cleveland.

Big, bushy-browed Gregory S. DeVine, C&O/B&O's president and chief executive officer, presides over lunch. More than just rank forces others to focus upon him. DeVine, an ex-journalist who made it up the ladder in the coal industry before joining Chessie nine years ago, is a forceful, magnetic man. He has a reputation as a competitor, and is known as a fast decision-maker. He also displays a streak of wild Irish wit that was honed and sharpened by years in the masculine world of the coal salesman.

He likes to play the role of the simple man surrounded by theorists and transportation sophisticates. He waves his cigar amiably, "You guys are great at scientific sampling and the computers make it a whiz." A glance around the table. "But you still don't count so good." The silence around the table isn't shock at DeVine's playful illiteracy —they know he is harping about equipment utilization again. DeVine thinks a lot more needs to be known about where cars are and how to move them faster. A few minutes later, over coffee, DeVine sits with a quartet of vice presidents working slowly through a tangled commercial possibility. DeVine's cigar points (like a divining rod, says one C&O punster) from man to man as he hunts dollars down to final hiding places.

DeVine's office is in the northeast corner of the 36th floor of Terminal Tower. The oak paneling and fireplace say little about DeVine, but the solitary

'We all have great personal stakes in C&O'

CYRUS EATON

'We want to increase our earning power'

JOHN KUSIK

'We need super-railroads—and super-managers to run them'

OWEN CLARKE

picture on the wall opposite DeVine's desk says volumes. It is a small colored portrait of Walter Tuohy, DeVine's predecessor. DeVine put the picture up after Tuohy died last spring. They had been close friends since young manhood.

What is C&O up to? DeVine thinks and fiddles with papers on his desk. (He answers letters, memorandums and such with neat, small squiggles across the top of the paper.) The real Gregory S. DeVine is revealed as a business pragmatist: "We run hard to stay even. We try to keep our customers happy and we try to keep every penny we can of every dollar we take in."

● **"Big John" the money-watcher.** Another of the offices that figure in the Terminal Tower theory of what C&O is up to is on the 35th floor, directly below DeVine's suite. This one is walnut-paneled and seems too comfortable in a pretentiously unpretentious way to be the office of a railroadman. But it is. It's where John E. Kusik works—when he is in Cleveland. In addition to being vice-chairman of C&O he is also senior vice president (and a director) of B&O and splits his week between Terminal Tower and C&O/B&O's Baltimore offices, using a C&O plane as a taxi.

Some people think Kusik is the most astute money-watcher in the railroad industry.

He has been a power at C&O for almost all the 18 years that have passed since he signed up with Chessie. An inkling of Kusik's strength of mind can be glimpsed in his watchful eyes as visitors talk. He seems to measure, weigh and assess without interrupting. His own speech is plain and to the point. Often there is irony mixed with the faint hint of an Estonian accent in his speech. Accent and irony notwithstanding, Kusik is "Big John" to C&O brass and workers alike. The nickname is for merit, not size: it reflects both the corporate stature of the man and the unabashed admiration of the road's irreverent wits.

● **Managerial style.** Kusik, as both man and manager, mirrors a great deal of the C&O managerial style. It is a style once described as based upon split-level thinking, "one eye fixed unblinkingly on the main chance and the other eye revolving, radar-like, as it scans C&O's own viscera." Insiders say Kusik is more than just a good example of the road's managerial style: they say he is the prototype and architect of C&O's aggressively analytic staff. Kusik himself regards the 20 years he spent with General Electric as central to whatever style he may have brought to C&O. "You work that long in finance with salesmen and engineers in the field of electronics—and you get the idea that technological change and the development of important young people is the heart of solvency," he notes. He is an ideal man to ask what C&O is up to. Kusik smiles frostily. "We want to increase our earning power," he says.

It makes sense. C&O's strategic zigzagging reflects continuous pressure on the road's territorial possibilities.

● **Eaton's long view.** The answer gets crystalline at the very center of C&O's blue-chip managerial circle. C&O's legendary chairman, Cyrus S. Eaton, may be 83, but he has a beatnik's disdain for cliches and a teenager's scorn for the premasticated wisdom preferred by the very rich and the unassailably secure.

He has a long view of why men do what they do. As a young man he worked for John D. Rockefeller. Eaton made a fortune at an age when other men are just starting careers. He has known the rich and powerful of the world for more than a half-century.

Why does C&O run so hard? Eaton nods, brushes at his thin white hair and walks around the antique-filled parlor adjacent to his office.

Eaton purses his lips, thinking. "We're good because our hearts are in C&O," he says suddenly. Then, with unerring taste, Eaton turns the bromide inside outward: "C&O is not a sideline with us. We all have great personal stakes in C&O." He is paraphrasing the New Testament bit about men's hearts being where their treasure is.

The phrase illuminates like a floodlight. Anyone with a pencil and an idea of the price of C&O stock can quickly put a dollar sign on the aggressive activism of many top C&O men. One can find the figures in C&O's most recent proxy statement. Eaton is down for 115,210 shares. The late Walter Tuohy (he died the day of C&O's annual meeting last year) owned 17,400 shares. DeVine owned 4,200 shares. Kusik owned 4,130 shares. Other C&O/B&O officers are also substantial shareholders, often with their entire savings wrapped around a slice of C&O/B&O's future.

● **Maneuvers and mistakes.** Eaton probably knows more about C&O's maneuvers and mistakes than any man alive. He has been on the C&O board since 1942. He became chairman of C&O in 1954. He succeeded Robert R. Young after buying Alleghany Corporation's C&O shares. But Eaton's memory spans a couple of C&O generations before that.

As a young man, Eaton met Collis Huntington, nephew of C&O's great

Robert R. Young: An authentic railroad prophet?

19th century builder and leader. He has known all of C&O's great leaders since—the Van Sweringens, the Balls, the strange and brilliant Robert Young. Eaton helped pick Walter Tuohy ("A man with the greatest capacity for friendship I've ever known") and DeVine ("A manager of the first magnitude. He'll make a great record. He has all the qualities of a great executive").

● **"All I've done . . . ."** Eaton's own contributions to C&O? He dismisses the question with a shrug. "All I've done is give them my unfailing support and backing through the years."

It's possible. But, of course, strategic virtuosity isn't that easy. Not in the railroad business. It's easier if you've been a C&O-watcher since the turn of the century, when Pennsylvania and New York Central controlled C&O. (Chessie has operated at a profit since 1889, but it went through the wringer in 1878 because ambitious managers over-extended the road.)

Eaton remembers the era when the brothers Van Sweringen bought substantial blocks of Nickel Plate, Erie and Pere Marquette. In 1922 they bought 30% of C&O—thinking about an NKP-C&O-Erie-PM system. When the ICC turned it down the Van Sweringens began looking West, pondering a C&O-Missouri Pacific system. All they managed to do before the depression forced them out of C&O was to get ICC approval for C&O control of Pere Marquette—in 1928.

Eaton watched C&O consolidate 12 railroads into the main system during the deflation of the early '30's. He sighs remembering. "Would you believe that Nickel Plate bonds were being sold for 5¢ on the dollar?" he asks. C&O, a money-maker even during the blackest days of the depression, rebuilt its lines and expanded its carfleet at rock-bottom prices. It also bought up control of Erie and Nickel Plate as well as a substantial share of Chicago & Eastern Illinois. (C&O sold its Erie and C&EI holdings in 1947 and distributed the NKP shares to C&O shareholders as a dividend.)

Eaton knew Young when Young was a financial wizard at General Motors, before he became a director of C&O in 1937. After Young and Alleghany bought the Ball Foundation's C&O shares in 1942, and Young became C&O chairman, Eaton bought into C&O and became a director.

● **Young made headlines.** It wasn't long before Young's moves were making headlines. By 1945, Young was talking about a merger between C&O-NKP-Wheeling & Lake Erie. He ran into a brick wall made up of NKP preferred shareholders. Almost incidentally, Young touched off the modern merger era that year when he got ICC approval for C&O merger with PM.

By 1947, Young and C&O were buying NYC stock—lots of it. Early in '48, with 400,000 shares of NYC in Chessie's portfolio, Young announced he wanted a three-way marriage between C&O, NYC and the Virginian. When he tried for representation on the NYC board, the ICC turned him down with the observation that such plans as Young had in mind were not feasible until "NYC can restore its earnings and credit to make a sound foundation for such a move." Unabashed, Young started looking in the other direction, talking about a transcontinental line stitched together from C&O, Missouri Pacific, NKP, Denver & Rio Grande Western and Western Pacific.

Eaton chooses words slowly describing Young. "He was a brilliant, ambitious and energetic man. He went to the NYC because he felt the Central needed him. He felt strongly that railroads should make money, because the welfare of the nation depends upon it. Young's influence is still working in the industry as well as here at the C&O."

● **Vindicated by time.** Other C&O men feel Young was one of the industry's authentic prophets. "Time is vindicating Young," notes a C&O department head. "The Northeast Corridor experiment with high-speed trains, the Pan-American Building on NYC air rights over Grand Central Station in New York, the Penn-Central merger itself—are major Young visions that only needed time to come to pass."

"Young was an industry evangelist—and he made it pay handsomely," says a C&O/B&O vice president.

He made a career of bullying those who cherished the status quo in railroading. "Railroad men are terribly sensitive people—unfortunately, they are not sensitive about cash," he once told some security analysts during his fight for NYC. It was a not-very-subtle appeal to NYC shareholders. He made dozens of enemies as he made hundreds of headlines.

Another C&O department head sums up the Young enigma this way: "He was a man who wanted old forms broken. Ideas were always the important thing to Young—he had no use for ideas and practices that were heading railroads right down the drain.

'There are problems within problems, ten layers deep'
C. VERNON COWAN

He felt some real busting-up was needed if railroads were to ever become economically, socially and politically acceptable again."

"He could see what was needed most of the time, but he often made questionable moves because of his own image needs or because of his odd bias for passenger trains," recalls an operating man.

Others recall his fastidiousness, his near-morbid dislike of touching things. "He even hated to pick up a public telephone, he was that afraid of germs," says a C&O officer who reports that wash-basin foot-pedals in Pullmans were Young's idea because "he didn't like touching faucets."

C&O men are at a loss to explain the suicide of their former chairman after he went to NYC. Eaton is moved, recalling the Young era at C&O: "It was exciting to be around him."

● **Eye on the main chance.** But the headlines didn't stop with Young's departure for NYC in 1954.

C&O scored big with B&O. Chairman Eaton reportedly frowned on several expansionist plans after he became chairman, but gave instant approval to the staff's plan to get control of foundering B&O.

NYC wanted control of B&O, too. Thus, in 1960, began a memorable control fight in an industry that has had many such. The struggle soon acquired an air of Thunderball and James Bond. Railroad executives were flying to Switzerland for clandestine conferences with Swiss bankers who could influence the owners of large amounts of B&O stock in European hands. With C&O

'The plan-performance report is our mid-month bombshell'
HAYS WATKINS

shareholder equities having a market value of $511 million against $141 million for NYC and $127 million for B&O, it wasn't long before the careful Swiss opted for C&O.

On February 4, 1963, control of B&O passed into C&O hands. A year later, C&O had a quarter billion invested in rehabilitating B&O. At the end of '66, Chessie's total investment in B&O (including the $119 million it cost to buy 90.7% of B&O's stock) stood at $438 million.

Has it paid off? Has C&O achieved the economies it said it would when it asked the Commission for control of B&O? Kusik is emphatic: "We are ahead of schedule in getting the economies we said would result from affiliation." The consolidated return of C&O/B&O contains a growing contribution from B&O. But perhaps more important to C&O in the long run is the immense spreading of its traffic mix and the economies of scale that will be possible when the properties are qualitatively equal and their earning power is on a par.

● **Dissonant wedding bells.** Eaton also gave a vigorous nod to the N&W-C&O proposal. That idea, say C&O officers, was born at a meeting of C&O and N&W officers discussing C&O/B&O's case for control of Western Maryland late in 1964.

The news rattled windows in railroad board rooms across the country. The ICC was already working toward an order allowing PRR and NYC to proceed with the consolidation of the century. N&W-C&O petitioned the ICC for a hearing date and the railroad world went back to the worry about traffic diversions and revenue divisions that passes for normality when momentous mergers are in the making.

By the summer of '66 there were hints that all was not well between the two couples at the double wedding in the East. Behind-the-scenes elbowing between N&W-C&O and Penn-Central was still decorous enough to allow the questions of indemnities for three protesting roads (Erie-Lackawanna, Delaware & Hudson and Boston & Maine) to ooze through the Commission and spill into the courts. The noise in the wings became louder when the Commission turned down N&W-C&O's request for an immediate hearing on their merger proposal. (The ICC finally set an April 17, 1967, hearing date.)

Penn-Central spokesmen charged that N&W-C&O were using the hearings being held over indemnification to neighborhood railroads as a vehicle to prolong competitive advantages possessed by N&W and C&O/B&O over unmerged PRR and NYC. To many observers, it seemed to be a charge with some substance. After nearly five years of silence on Penn-Central, N&W had suddenly asked the ICC to delay Penn-Central in June, appealed to a federal court for an injunction in September, and finally appealed to the Supreme Court in October.

● **A shouting war.** By autumn the giants were pushing each other around. The row became a shouting match. Words that hadn't been heard in railroad circles in years sparked the hassle in the East—and pushed the Rock Island control case to the back pages of financial journals.

Penn-Central charges that N&W-C&O is trying to "filibuster Penn-Central to death." PRR's chairman, Stuart Saunders, says introduction of new issues by N&W-C&O into the indemnification hearings for the neighborhood roads in the East conceals a "Machiavellian" desire of N&W to "avoid its obligation to take the E-L, D&H and B&M into its system as it agreed to do when the Commission authorized the N&W-NKP-Wabash merger and to delay or kill consummation of the Penn-Central merger for its own competitive advantages." By October, N&W-C&O asked the Commission to reconsider the order indefinitely postponing hearings on their merger bid. The fencing at the indemnification hearings became more open. Onlookers reported that PRR and N&W, at times, seemed to be playing chip-on-the-shoulder and daring each other to knock it off. By December it was obvious to everybody that the eastern giants were glaring at each other eyeball to eyeball. Late in the month the ICC issued an examiner's report recommending N&W take in E-L and D&H and posed conditions for B&M's future; then, C&O, N&W and satellite roads filed a brief with the Supreme Court asking that the ICC order permitting immediate consummation of the Penn-Central merger be set aside. The Supreme Court agreed to hear oral arguments Jan. 9.

● **Business as usual.** There is little tension in the air at Terminal Tower about the matter. DeVine, Eaton and other C&O/B&O chieftains have little to say about the drama unfolding at the Supreme Court and the ICC.

Eaton and C&O have been in both places before, many times. They have a cool view of the possibilities—either way. The arithmetic and the prospects behind developments in the East are dazzling. But so is the view from Terminal Tower. DeVine and the rest of the C&O crowd are much more involved in the realities—the men, machines, markets and money—of C&O/B&O as they interact to turn cash into transportation and back into cash again in quickening, wider cycles. It is an understandable involvement. It is a long way from Cleveland to C&O/B&O's outermost terminals.

It's even a long way down the hall at Terminal Tower once one leaves Eaton's antique-furnished parlor. Answers to C&O's present and future, if not too clear in a reading of the past, get more elusive and more complex as one talks to other men in other offices off Terminal Tower's marble-lined hallways or at B&O's Central Building in Baltimore, where more and more C&O/B&O power-centers are moving nowadays.

● **Free-form management?** There seem to be few sacrosanct lines in either place. A C&O/B&O vice president declares flatly that there is no organization chart for anything above a departmental unit. Chessie officers insist they're encouraged to participate in free-wheeling discussions of each other's affairs. A wag in the road's public relations department describes C&O/B&O's managerial style as "railroading in the round." He may be right.

Eaton sits at the center of the C&O universe, with DeVine and Kusik beside him. The three are the only C&O officers sitting on the Chessie board.

Beyond that, only insiders with a highly developed instinct for such matters can spot the pecking order of C&O/B&O's staff. The roads' operating vice president and coal traffic vice president are traditionally powerful chiefs on Chessie. But, there are 22 corporate officers. All but three are joint C&O/B&O officers. There is one C&O officer, C. W. Campbell, vice

Some call it 'railroading in the round'

president Merchandise Traffic, and one B&O officer, Chick Zarfoss, vice president Merchandise Traffic—and there is also E. Truman Wright, vice president and general manager of C&O's Greenbrier, the resort hotel in West Virginia. There are an astonishingly young group of men by rail industry standards. Only five were with C&O prior to 1940. Seven others joined C&O after 1950. Five of them were not even with C&O prior to 1960.

Their more conservative, Pecksniff peers in the industry find them somewhat raffish, a little on the grey-flannel-mind side. A western railroad's treasurer describes them as "a bit kookie." But the C&O/B&O staff tends to be proud of being somewhat unpredictable. One of them quotes Thoreau: "The man of settled views has only one resource left—prayer." Another defends C&O's evolution toward management-in-the-round by misquoting Physicist J. Robert Oppenheimer: "We know too much for one man to know much."

Quoting people like Thoreau and Oppenheimer is part of the C&O managerial style, too. On balance, C&O's staff has more formal education than the average railroad staff.

Beyond any other difference, however, is the unsettling constancy with which they keep an eye on money.

• **Bring Cleveland to the railroad.** One of the men with C&O prior to 1940 is C. Vernon Cowan, vice president in charge of operations for C&O/B&O. Cowan, a pleasant, courtly North Carolinian, started work at the very bottom of C&O's manpower hoppers—as a switchman at Newport News, Va., in 1936.

He's a long way from the coal docks now. His mahogany-paneled office is at the end of the fifth-floor corridor of B&O's neo-Federal office building in Baltimore. His taste in art, interesting in itself, reflects the fact that Cowan (and most C&O/B&O officers) doesn't need the reinforcement some industry officers get from a signed photo of the president on the wall. Cowan's taste runs to Victorian steel engravings, a copy of Praxiteles' head of Hermes and a jade-green Ming dynasty horse statuette.

Cowan is a frank man. Asked what he thinks about C&O/B&O's separation of staff from day-by-day problems, he admits, "I didn't think much of the idea when I was a regional manager.

'Our work is long-range and corporate-oriented . . . Profitability is the name of the game' ROBERT McGOWAN

"I went to Cleveland thinking staff work is dull. Perhaps it always seems that way to men running a railroad, where problems are immediate and crying for obvious solutions. I was wrong. At Terminal Tower I learned very quickly that there are problems within problems, and sometimes problems are ten layers deep."

How did Terminal Tower change Cowan's view of running a railroad? "It made me aware of the staff analysis and planning going on. I wish everyone on C&O/B&O could go to Cleveland, but since I can't manage that, I try to make our staff work bring a bit of Cleveland to everybody in the field."

How? "By making railroaders more net-conscious." Cowan waves toward reports on his orderly desk. "We have daily meetings with general managers and department heads. We go over the previous day's business. I make an effort to pass on statistical analysis in terms of both business and money. Activities, when possible, are discussed in terms of pennies per share."

The larger C&O/B&O picture? "We file all information upward immediately. We make monthly estimates of activity and check daily to see how close we are. Weekly summaries condensing the action all over C&O/B&O are sent to Mr. DeVine and the staff. We encourage regional managers to exchange information freely—especially all events of importance.

"We constantly refine operations, planning and estimating. It is almost an irresistible temptation to look good by making forecasts 'easy' to make. But, by looking at our work through a pennies-per-share lens, we don't breathe easy until we make plan and the $4 per share for the shareholders—and a generous safety margin, too."

• **The dividend objective.** Cowan's concern for making C&O's $4 dividend is an anxiety voiced by many C&O/B&O officers. "I think 'Big John' would like to plant a gadget in our skulls about that dividend," says a former B&O officer with joint responsibilities at Baltimore.

Kusik is all for the idea of C&O/B&O men being at battle-stations about the dividend. "If you don't have a dividend objective, you don't have anything to shoot for. And it's got to be high enough to make you stretch." It's one of the ideas that C&O insiders regard as the Gospel According to Big John. Kusik preaches the need for rail managements to fully understand financial control and their role in such control "as well as the philosophical implications of productivity and the cash conversion process." Kusik regards government regulation of profit via income taxes, depreciation schedules, rate restriction and general tax policies as a formidable force for destruction of the railroad industry.

"Earning power is the only defense railroads have," says Kusik. He gets up and walks around. "From the standpoint of capital and people—if Macy's handled inventory as inefficiently as railroads, Macy's would go broke. Railroads have been going broke." Kusik's Estonian accent becomes more pronounced. "We have no breakthroughs yet. Our carfleet, in terms of reproduction cost, is equal to 500 jets worth $5 million each. Because a railroad car is small, no one gets nervous if it stands still—as they would with a $5-million jet. But a fleet of cars can lose you just as much money as an inefficiently handled fleet of jets."

How about C&O's timetable for merger with B&O? "It depends upon the creation of B&O earning power," says Kusik. Not reduction of B&O's debt? Kusik shakes his head. "Earning power is the key. A half-billion in debt doesn't mean a damned thing if you've got enough earning power. B&O's opportunities are far less developed than C&O's opportunities." But when will C&O and B&O merge—

'You have to know yourself before you can improve'

CHARLES HENRY, JR.

a date, a ratio of earnings to invested capital? Kusik shakes his head again. "Merger will probably come . . ." he pauses and smiles, ". . . after we merge with N&W sometime. If B&O had been of comparable financial strength, we would already be merged."

Kusik is widely regarded as the man who kicked off the computer era on U. S. railroads back in 1955. He frowns as he admits that C&O no longer leads the industry as it did for years. "But there are still only two or three roads that can show us much in the field," he adds. He still thinks the area offers potentially enormous returns: "I think, long-range, and not necessarily in today's dollars, that money invested in innovation, especially in the direction of automation, may offer the greatest returns ultimately"

Kusik's view of the industry's traditional indices and statistics is short and sour: "They're not worth a damn.

"Our financial reports and our continuous effort to spread financial sophistication among all levels of C&O has been a main part of making the road more customer-oriented, more fact-oriented. We maintain a substantial staff organization to provide answers . . ." In addition to the continuous pressure internally for financial ability on the part of managers high and low, Kusik says C&O/B&O maintains continuous contact with customers, financial institutions, analysts and the public. "We go beyond this. We are responsive to them."

● **Who keeps score?** On Terminal Tower's 28th floor, in another walnut-paneled office, there is a framed, cancelled check on a table. It is made out to the National Bank of Washington, D.C., and is in the amount of $1 million.

The office belongs to Hays Watkins, C&O/B&O's young vice president of finance. The check represents what C&O financial people believe to be payment for the first piece of short-term commercial paper ever issued by a U. S. railroad, a 90-day, 4 1/8% note.

Watkins' group is regarded by many experts as the outstanding financial department anywhere in the industry. From that department, on the first working day after the close of a month, a Flash Report goes to C&O and B&O board members, to the C&O/B&O staff and to a few top assistants. The report, 10 years old on C&O, was inaugurated for B&O in 1964. Now there is a combined report—though a few separate facts are shown.

The 50-or-so men who see the Flash Report get an instant-look at C&O/B&O performance and results. Consolidated performance for the previous month is shown measured against plan—and also shown year-to-date against plan. Revenues are shown in three categories: merchandise, coal and coke, passenger and other. Expenses, net earnings and earnings per share are shown. There are also figures for cash, working capital, property additions, payrolls, mancount and carloads—broken into coal and merchandise. At the bottom of the page is the outlook for the current month—the best forecast C&O/B&O people can assemble. Overpage there is an individual precis of C&O and B&O in terms of revenues, expenses, improvements to plant and equipment, cash, working capital and outlook.

Watkins is a soft-spoken man even more youthful in appearance than his 40 years. He is the first C&O management trainee to make it up to vice president. He came to work for C&O in 1949, after getting a master's degree in economics and business administration from Northwestern University. There is a faint sound of his native Kentucky in his speech as he explains the shift in emphasis that has taken place in Chessie's famous flash reports over the last decade. "What used to be a simple comparison of current activity with the past is now a report with responsibility shown department by department."

● **Midmonth bombshell.** He smiles. "Of course, midmonth is when we issue the bombshell. That's our plan performance report. That report is the one that takes a detailed look, department by department, into every commercial, financial and operating aspect of C&O/B&O." There are analyses of departmental spending, equipment, rents, track renewal programs, roadway additions and equipment additions. Investments in WM, Reading, CNJ, B&O Chicago Terminal, the Staten Island Rapid Transit, the Greenbrier (which manages to return a substantial net to C&O year after year) and other investments are analyzed. Working capital, cash and short-term investments and debt activity are listed—and there is also the ubiquitous analysis of money working on C&O/B&O.

The entire, spiral-bound report has what must seem to be a hideous feature to some of C&O/B&O's managers, a feature described by a B&O officer (now retired) as "Kusik's bloodshot eye on the cash." Sprinkled throughout the 26-page report are figures in red and paragraphs underscored in red. In one way or another, those figures and paragraphs represent departure from plan. Watkins sighs, "Any departure from plan has to be explained to the president. We continually update our outlook as we find out exactly why variations occur."

Does it work? "Yes. It is systematically creating a much more intense awareness of cash throughout the company."

● **Know what you do well.** In Baltimore, in an ultramodern office overlooking the Charles Center Downtown Redevelopment, Charles Henry, Jr., C&O/B&O vice president for commercial development, is one of the men who attempts to focus such financial insight into opportunity as it exists or can be made to exist. He is C&O/B&O's managerial probe into profit possibilities. He describes a key facet of the roads' managerial style: "Self-knowledge is one important by-product of effective staff work. You have to know yourself before you can improve, before you can effectively concentrate upon whatever it is you do well."

Henry's job is to ponder possibilities. An awesome capacity for analysis is at his disposal. "We hunt for leverage, especially profitability. Pricing, equipment, acquisitions, service—all start with commercial considerations and end with managerial reporting systems. We set 'em up. Men from all departments get involved. We have a group working with the computer department all the time."

How do you analyze profit potential? "We have a group headed by an officer of our finance department, Kevin Cahill, manager profit-margin analysis, who works here all the time. His group works on projects we formulate. They translate from us to the financial people at Terminal Tower and here in Baltimore—and from them to us. We have financial insight backing our day-by-day research into commercial possibilities."

Henry says the roads' commercial development effort is off and running. On Jan. 1, 1965, eight market man-

C&O, N&W look to a 'marriage of equals'

agers (auto traffic, iron and steel, grain, lumber and paper, stone, clay and glass, food, chemicals and forwarders) began attacking specific potential in the roads' traffic mix. Is it the New York Central approach? Henry shakes his head. "No, it isn't. NYC has market specialists, but the similarity ends there. Responsibilities and operations are different. On NYC the managers are market research specialists and report to the director of market research. Ours are officers responsible for commercial development.

"Both C&O and B&O have experienced substantial changes in traffic mix, especially through tonnage losses to trucks in recent years. We've stopped the erosion," says Henry, but admits it takes a long time to score substantially.

● **Planning is big, too.** Henry not only taps Watkins' financial department for help in doing C&O/B&O's commercial homework, he also leans hard on the computer department that comes under the jurisdiction of Robert McGowan, C&O/B&O vice president for planning.

McGowan looks like a football player. He was—on the varsity at Bucknell where he got a degree in finance. Located a floor below Cowan in B&O's Center Building in Baltimore, McGowan heads up a department of 450 people importantly involved in C&O/B&O's future. It is a young department—average age is about 12 years younger than the average age of C&O/B&O's rather youngish management. The group takes on chores in five important areas: corporate planning, organization planning, research, industrial engineering and data systems.

The planning department was organized right after the ICC approved C&O control of B&O because the men at Terminal Tower grasped the magnitude of the job ahead. McGowan wastes few words describing the decision: "Planning requires the full-time attention of competent people. The job cannot be done by the part-time attention of managers primarily involved in the day-to-day affairs of the railroad.

"The work here is long-range and corporate-oriented. We look at the railroad as a total business organization in terms of the future goals and needs of the company and the major programs required to achieve them. Our primary role is to coordinate the planning of individual departments toward corporate goals and to provide technical staff support to departments for carrying out their programs."

● **Whiz kids.** And McGowan has the manpower to do just that. One is tempted to call them whiz kids. Two-thirds of the professional people in the department have college degrees. More than 20% of them have master's degrees or better. There are men with PhD's in mathematics and civil engineering. There are seven men with masters' degrees in economics or business administration. There are electrical engineers, aeronautical engineers, industrial engineers and mechanical engineers.

They were educated at Harvard, Princeton, Columbia, the University of Chicago, Stanford, MIT, the University of Pennsylvania, Purdue, Yale, the Naval Academy and other top schools. Nine or ten of them had railroad experience before going into the C&O/B&O planning department. Outside experience represented by the staff of the planning department includes truck management, manufacturing, marketing, management consulting, industrial engineering, data systems design, financial management, aeronautical research, electronic engineering and operations research.

● **Does it work?** Impressive as McGowan's cadre is, one wonders how effective such effort is. McGowan spreads a "Corporate Planning Guide" on his desk. It is a catalog of major projects under way in all C&O/B&O departments. Summaries list resources required, benefits and target completion dates. "Profit improvement is the name of the game," he notes. "Greg DeVine always checks to see if the benefits promised wind up in the till."

C&O/B&O President DeVine seems to get into a lot of odd areas. Howard Skidmore, C&O/B&O vice president for public relations and advertising (an ex-New York Herald Tribune reporter), says DeVine is a good soldier about the ceremonial requirements of the C&O/B&O presidency. "He'd rather run the railroad, but he'll take time to lead the singing at the annual B&O holly tree trimming before Christmas. He makes the speeches he has to—good ones, too. He hits Washington regularly. He has the public in mind in everything we do. He'll also take time to talk to C&O/B&O men whose lives are being changed by the affiliation. He, like Tuohy, has a high regard for and understanding of people."

Keeping the public in mind is, of course, Skidmore's job. From his ultra-modern office on the 39th floor of Terminal Tower, he directs what is likely the most extensive and consistent public relations effort made by any U. S. railroad. C&O has come a long way since Chessie the cat on a calendar represented most of the road's response to the public. Chessie is still everywhere to be seen on C&O, but the C&O/B&O press relations, public relations, advertising, internal communications, stockholder relations and other such chores are handled by a staff of about 45 in Cleveland, Baltimore, Detroit, Huntington, W. Va. and Richmond, Va.

● **Dedicated shareowners.** C&O/B&O communications with employees are probably as good as any in the industry. The roads' annual report to shareholders is a perennial prize-winner in Financial World's competition for annual reports. Shareholder relations cannot be described as anything but spectacular. C&O's shareowners have paid more than $2 million to attend the road's week-end "house parties" at Greenbrier. "We must be the only company in the country," says Skidmore, "whose shareowners pay to attend the annual meeting and celebrate at a champagne ball afterward."

Some of Chessie's loyal stockholders (and many C&O employees, too) were upset when the N&W-C&O merger plan broke into headlines. Some of the stories seemed to imply that N&W was about to take over C&O. Peculiarly enough, for a railroad with C&O's pride, Chessie's coldly realistic managers thought the name of the corporation surviving such a consolidation of no consequence in drawing up the agreement with N&W. That agreement, of course, provides for a board of directors drawn equally from both roads—and that board could very easily select a new name for the super-system the merger would create. C&O shareholders and employees were mollified by assurances from both C&O and N&W leaders that the marriage was between equals—and that Chessie would continue to purr for the public as she has for almost 40 years.

● **Future-orientation.** Clues to what C&O is up to can be found in the roads' crisp, informative publications. Annual reports, flash reports, "Chessie/B&O News," speeches, booklets and other items reflect an astonishing degree of future-orientation. In a speech not long ago, Skidmore urged C&O/B&O men to "get ready for the kind of space-age railroads the nation must have." A recurring theme in the speeches C&O/B&O brass deliver at their own gatherings is the need to use the years ahead as the perspective for today's work.

C&O/B&O's Consolidated Showing (in millions)

	1961	1962	1963	1964	1965	1966*
Net income	1.9	37.7	47.7	50.4	64.7	N.A.
Net income as percentage of revenues	.3	5.3	6.4	6.6	8.0	N.A.
Total funds generated by operations	51.4	98.5	112.4	107.0	130.8	125.2
Coal revenues	238.3	258.2	273.7	277.4	282.9	279.4
Merchandise revenues	362.7	381.4	398.1	416.2	453.0	469.4
Payrolls	362.9	367.2	367.9	371.4	387.5	395.0
Wage ratio	53.3	51.1	49.3	48.4	47.8	47.8
Operating ratio	84.1	79.0	78.2	78.5	76.7	77.3
Bad order ratio	13.9	7.6	6.9	5.3	4.6	3.6

*Estimated. N.A.—Not available.

And that may be what C&O is really up to. The road really believes in managers with varied viewpoints keeping both eyes fixed on futures.

Chessie's managers have a taste for introspection quite unusual in the industry. Is it result, symptom or cause of C&O's managerial style? DeVine insists that C&O makes a big thing of having managers reflect wide and perceptive insights gleaned both inside and outside railroading. "Our vice presidents are a study in diversity. Ken Ekin, law, is a second-generation B&O man. On the other hand, John Ganley, who keeps an eye on our taxes, was a public accountant. Bill Ollerhead, our VP for industrial development, came from a port authority. Ernie Wright, our piggyback vice president, was a truck company president. Then, too, we mix skills internally. Hewitt Biaett, a commerce attorney, is in charge of C&O/B&O coal traffic."

Listen to C&O/B&O Vice President Owen Clarke. He says the need for responding intelligently to today's internal and external challenges is prompted by "the nation's future needs."

● **Super-railroads needed.** Clarke, a former Interstate Commerce Commissioner who came to C&O in 1959, sums up a great deal about the pressures behind the C&O managerial style: "Management problems are far different than those of even the relatively recent past—and, in turn, their solutions call for management skills, knowledge and ability of a far different order than those charactertizing effective railway management of a few decades ago. Departmental lines were sharply drawn and few railway officers really had much opportunity to view the business in all its aspects. Today, the combination of competition, over-regulation and technological change demand a radically different approach to management—and a different kind of manager. If we do no more than hold our own, we'll be handling 50% more business in 10 years. It's a task that calls for super-railroads. . . ."

Sitting in an office around the corner from DeVine, Clarke himself is an interesting example of the roads' managerial style. Brought in for work on special problems in 1959 ("It was understood," recalls Clarke, "that I was not going to be used before the Commission"), he was put right to work on a king-size problem—piggyback. C&O, underestimating the appeal of trailers on flat cars, failed to get into TOFC until 1959. C&O piggyback operations, now one of the road's fastest-growing traffic segments, started under Clarke's direction. In 1960, he took over the purchases and stores department, worked closely with McGowan's planners and William Eck in accomplishing a complete overhaul of the work and organization of the department. Manpower was reduced, inventory was cut almost in half and the vast coordination of parts and supplies needed by affiliation between C&O and B&O began. Clarke's duties in that area ended early last year when Eck was elected C&O/B&O vice president for purchases and stores.

Clarke also found himself heading up C&O's personnel and labor relations work. Both were troublesome. C&O-watchers insist that one of the tragic failures of C&O management after Young's departure was the collapse of some rather promising personnel practices that had been inaugurated in both the personnel and labor relations areas.

Not only had some bright, promising executives left C&O, but the effort to recruit replacements and cadets from campuses languished. There are some who insist that the lull in Kusik's brilliant beginning with computers came because of burdensome labor contracts rather than a failure to exploit the computers' capabilities.

● **Turnabout.** The situation was turned around. Clarke centralized labor relations and personnel functions, set up employment practices for raising employment standards, began a salary administration program and immediately launched an extensive recruiting and management training program. A total audit of C&O/B&O manpower was also completed.

Clarke grins as he describes the inflow of highly qualified people into C&O/B&O. More than 100 college graduates sign up with Chessie every year. "We hire people as varied as foresters, geographers and biologists as well as lawyers, engineers and economists," he says. "We average 18 men a year for our management trainee program. We have young C&O/B&O men out combing 40 to 50 campuses for talent every spring. They're all handpicked recruiters, themselves graduates of the campuses we send them to —and also graduates of our 18-month interdepartmental training program."

What kind of men wind up in the program? Clarke's round, ruddy face lights up. "We've tried to get the department heads to indicate what kind of mix will best suit their long-range needs. But, ultimately, you have to assess what kind of future you're going to have. Our '66 group included men with degrees in philosophy, sociology, marketing, economics, psychology, political science, physics, chemistry, industrial engineering, mathematics and liberal arts."

Clarke also functions as one of DeVine's advisors on how to attain C&O's external objectives. One wonders if his not working for the C&O before the Commission meant he was not "in" on over-all strategic planning. "On the contrary," says Clarke, "I was consulted on outside moves from the beginning."

One thinks about that. Clarke came to C&O in 1959. A man with his background and insight into the nature of Washington in general must have been worth his weight in diamonds.

● **So, what is C&O up to?** C&O justifies its huge investment in B&O as a quest for earning power and competitive opportunity. Its managers negotiated the proposal to merge with N&W because they say such a consolidation is needed to offset the competitive edge that Penn-Central would have in Official Territory. Both moves suggest the road has lost none of its old zest for great enterprise.

Its drive for improved service, internal control and efficiency seems to be accelerating.

Together, the internal and external moves of C&O suggest a new kind of railroad is in the making by the C&O/B&O managers at Terminal Tower and Baltimore.

What kind of new railroad? The answer varies widely from man to man at C&O/B&O. Cowan suggests that a better railroad will result from improved teamwork between people—and be-

(Continued on page 29)

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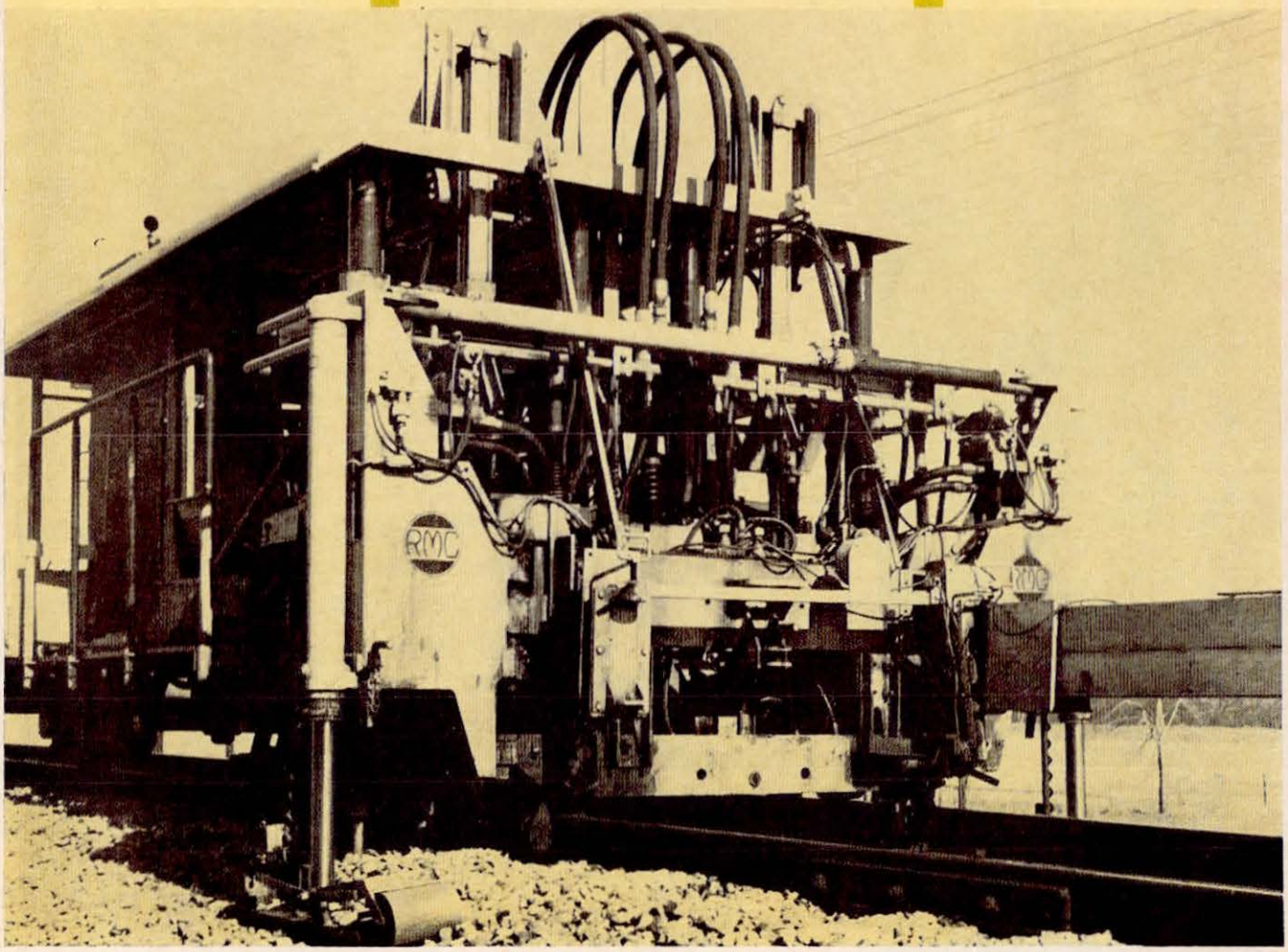


Circle 3 on reader service card

Blueprinting a super-railroad

(Continued from page 25)

tween people and machines. Kusik says that financial insight into what railroads do is the beginning of industry salvation. Henry feels that self-knowledge is going to be the essence of important change for railroads. McGowan the planner feels the outline will be clearer when C&O / B&O can more fully harness new technology—particularly the computer—to bring about breakthroughs in conventional railroad operations. Skidmore says that railroads must work to adapt into vastly different social circumstances.

Watkins insists that the railroads' brave new world won't arrive until tight financial control enables the industry's cash-conversion cycles to produce the money that will—as Robert Young hoped—make railroads politically and economically acceptable. Clarke says that super-railroads will be created by super-managements—and that the time to start on such super-managements is with every batch of management cadets hired from college campuses.

Eaton, in a roundabout way, agrees with all his chieftains, but insists that what needs doing will more likely be the work of owners and not managers.

DeVine synthesizes all these views in one elemental expression: "We have to be of more and more service to customers."

As such matters go, part of Chessie's future is out-of-reach of any managers, however gifted, however responsive to a rapidly-changing society. Railroads will always wait as the Supreme Court and the Interstate Commerce Commission try to weave justice from arguments, pleas and the vague imperatives of the public interest.

But that part of the future in C&O's hands? They spend money to make money. The road's capital expenditures are perennial blockbusters in the industry. They boast that their shippers don't wait for cars. Perhaps most distinctively, C&O managers could be evolving a new school of rail managerial style, almost in the manner of the great Italian painters in the renaissance who were heirs to and amplifiers of the skills that were passed on to them by the painters to whom they were apprenticed—often through several generations of masters. Of course, the evolution of super-managements costs money, too. But, as DeVine is quick to say, it may be more costly to the industry in the long run to not have such managements. ■

LUTHER MILLER

AS THE EDITOR SEES IT...

HAPPY NEW YEAR?—The seasonal oracles have spoken, and it can now be confidently stated that (1) railroad net income in 1967 will range between $600 million and $1 billion; (2) orders for new freight cars will be in the neighborhood of 26,000 to 90,000; and (3) capital expenditures will amount to $1 billion—or $1.5 billion—or $2 billion. Meaningless? Of course. And so are most of the bewilderingly contradictory forecasts that have been flowing out of the front offices of railroads and railroad suppliers in recent days.

In the crystal-ball department, we've seldom seen such shenanigans as the present season has visited upon us. Suspension of the investment tax credit, a predicted slowdown in the national economy, the possible effects of a certain wage increase, the probable effects of a possible rate increase—all these are casting their shadows. "But I get the feeling," memos senior editor Gus Welty, who has spent the last several weeks polling chief executives on prospects for the new year, "that somewhere amongst all the trees, the whole woods has gone marching past."

Railway Age's own predictions for '67 will be in print Jan. 16, in our annual Review and Outlook Issue. They are going to prove mildly disappointing to the compulsive optimists; but it is a pleasure to report that they are going to give very little comfort and joy to the professional hand-wringers.

New Year's Resolution No. 1: Let's not forget that shadows are visible only when it's generally sunny.

THE BILL WHITE WAY—It's probably too early in the season to nominate a man of the year—but our candidate for man of the season, at the very least, is the chairman of the Erie Lackawanna, William White.

Few railroad chief executives had better reason, just a few years ago, to haul out the crying towel. But Mr. White is an eminently sensible man, and he did just the opposite. He began to spend money, a lot of money for this beleaguered carrier—$52 million in the last 42 months alone, all invested in new cars and locomotives.

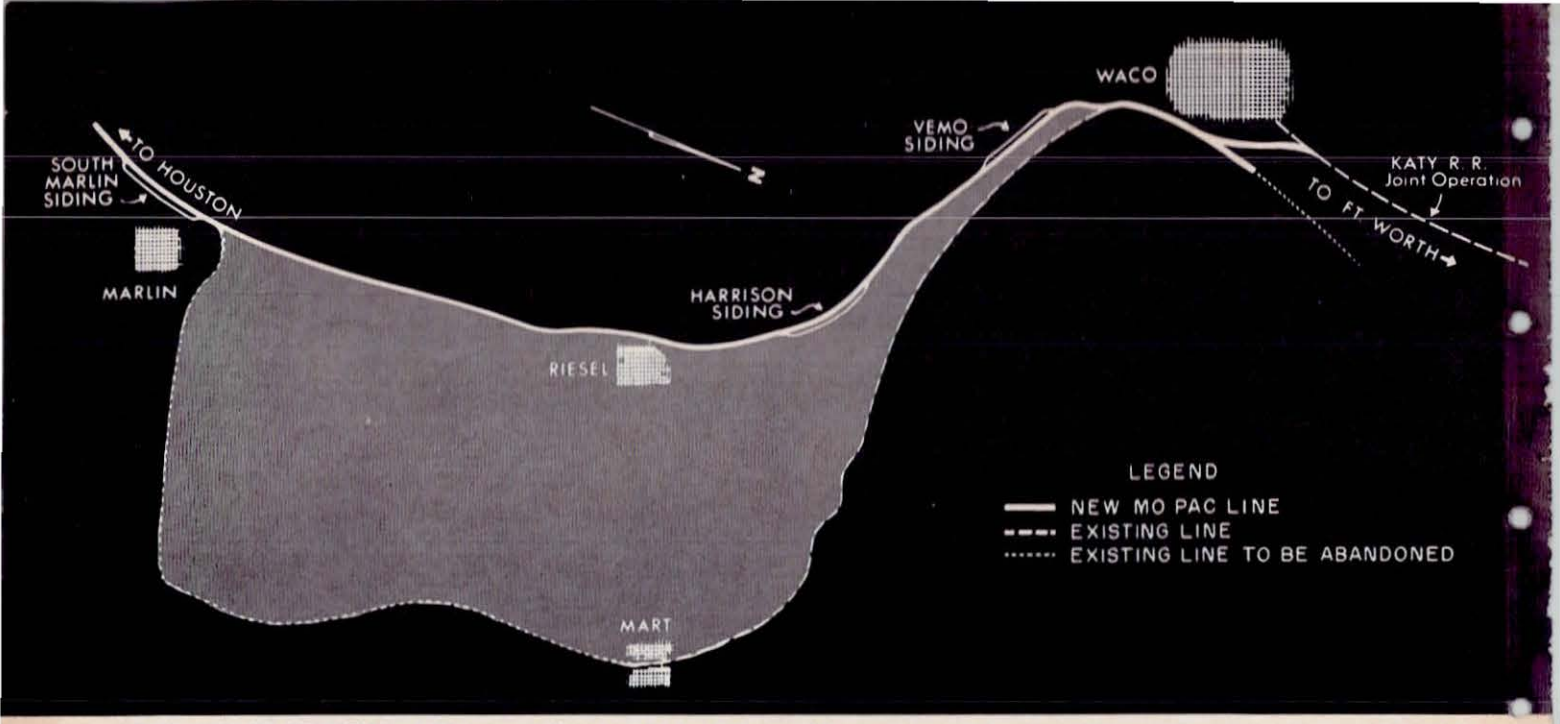
Result: After seven years of wallowing in deficits, Erie Lackawanna has just reported its second consecutive profit, something between $5 million and $7.5 million.

Bill White and his board of directors don't really know, any better than the other prophets, what lies ahead. But they're taking no chances. "Regardless of developments," says Mr. White, "Erie Lackawanna is going about its business of building up traffic and reducing costs so as to enhance its earning power, not only for the present but for the years ahead." And that's why E-L has just decided to boost its capital spending in '67 to $25 million, from 1966's $17 million.

At 70, Bill White has some 50 years of railroading behind him; we hope he has many more years ahead, because he is unmistakably a member of that "new breed" of railroaders we've all been hearing so much about and upon whom the future of our industry so heavily depends.

EVERYBODY TALKS ABOUT IT—Joe Kizzia, who was executive editor of this magazine before becoming chief editor of The American Builder, says construction men figure that inadequate advance warnings of bad weather annually adds about $10 billion to their costs. The situation is sufficiently serious that the U.S. Chamber of Commerce is holding a meeting in Washington Jan. 12—of builders and weather experts—to seek some remedies. Joe wonders if railroads aren't also being frozen out of a few millions a year by inadequate forecasting.

We've heard of some roads that subscribe to special weather forecasting services. Are these adequate? Can more be done? Maybe railroads ought to get together with these Washington experts.



WACO-MARLIN SEGMENT of SP branch line bought by MP was 12 miles shorter than latter road's line between the two points.

SP branch helps MP cut mileage

MP buys and rebuilds old SP line as part of project to shorten its Ft. Worth-Houston route.

Item—The Missouri Pacific has a line between Waco, Tex., and Marlin which negotiates a circuitous route to reach the little town of Mart. As part of a bigger project to shorten its route between Houston and Ft. Worth the MP wanted to cut the mileage between Waco and Marlin. Moreover, its existing line between the two points was badly in need of overhauling.

Item—The Southern Pacific has a branch line extending from Waco southerly through Marlin to Cameron, Tex. The Waco-Marlin segment of this line is 12 miles shorter than its MP counterpart. The SP branch was slated for abandonment.

With the needs of two railroads so neatly dovetailed as sketched out in this situation a deal was almost inevitable. The MP bought the Waco-Marlin segment of the SP branch, which is 24.4 miles long, and embarked on an improvement program to upgrade it to main-line standards. On completion of this work the plan is to abandon the old MP line between Marlin and Mart. The remainder of the line will be retained to permit service to Mart to be continued.

• **Grade-line "ironed out."** The work done on the old SP segment amounted virtually to reconstruction. The line had originally been built in this rolling country in such a way as to minimize grading. This meant that it followed the surface of the ground as closely as possible. The result, as described by an MP spokesman, was a series of "hogbacks" and short sags. The grades were not excessive. However, it was felt necessary to average or smooth out the grade line to eliminate the short sags and the detrimental drawbar action caused by them.

In addition to extensive revision of the profile the upgrading project also required complete reconstruction of the track. Existing track was laid with 75-lb jointed rail; in the reconstruction work this was replaced with 119-lb butt-welded rail. In the new track section there are 12 inches of crushed-rock ballast under the ties. This is placed on an 18-inch cushion of sub-ballast.

In undertaking the actual work of reconstruction the track was sold to a scrap dealer with the proviso that he would take up the track and dispose of the materials. Immediately behind the track-removal operation a grading contractor—Allhands & Briley, Dallas, Tex.—started the grading work. Indicative of the extent of this work is the fact that at one location it was necessary to lower the old grade line 18 feet, while at another it had to be raised as much as 13 feet.

In performing the grading work one of the considerations was to salvage existing ballast for use as sub-ballast for the new track. Where the grade and line revisions were minor, the old ballast was left in place and bladed off to the new grade elevation. Where the changes in grade or alignment were more extensive, the old ballast was stockpiled pending subsequent reuse—if this could be done economically. Where necessary to obtain the needed amounts of sub-ballast, the supplies of old ballast were supplemented by limestone screenings obtained locally.

• **Trench for sub-ballast.** MP practice calls for a rather unusual arrangement of sub-ballast. Instead of being placed on top of the subgrade, sub-ballast fills a trench in the subgrade to provide a stable impervious base, 18 inches in depth, under the ballast section. Normally, the sub-ballast material is hauled to the location in trucks which, to secure maximum compaction, are driven over the material already in place.

MP engineers feel that their method of trenching the sub-ballast helps this material to perform more efficiently in serving its function of acting as a barrier to prevent moisture and fines from working up from the subgrade into the track ballast. They feel that, by placing the sub-ballast in a trench and compacting it thoroughly, rain falling on the ballast section will not penetrate into the sub-ballast but rather will drain out to the subgrade shoulders and

thence into the side ditches.

• **Wide side ditches.** In grading for the rehabilitated line another feature that is favored on the MP—wide side ditches—was included. These ditches normally are 9 feet wide at the bottom. The outer edge is 26 feet from the track center line. This provides for excellent drainage. It also permits use of off-track equipment, with resulting economies, compared with work-train service, for subsequent cleaning of the ditches.

Bridge work figured prominently in the reconstruction of the line. Originally, there were 12 bridges. All except one were timber-trestles. The exception was a 100-foot steel span with timber-trestle approaches. Seven of the original bridges were replaced with corrugated metal pipes. Two others were replaced with concrete-pile trestles, a standard form of construction on the MP. Another two were raised and strengthened. The steel span was replaced with a concrete-pile trestle to eliminate clearance restrictions. The timber-trestle approaches were strengthened by changing from three-ply to five-ply chords and applying new decks. To make an adjustment in the grade, one timber trestle approach was raised slightly by shimming. Bridge work was subbed by Allhands & Briley to the Austin Bridge Co., Dallas.

• **Building the track.** Even before grading and bridge work had been completed, a contractor was busy building a track on the new roadbed. In this work, the new ties, delivered banded in bundles, were distributed from trucks. The quarter-mile rail lengths were pulled from the rail train, two at a time, by a Pettibone Mulliken Speed Swing fitted with axle extensions to permit it to straddle the ties while unloading the rails.

Aside from construction of the main track, other track work included the construction of connections between the new line and the MP's existing line at Waco and Marlin. Two new 165-car sidings were constructed along the new line. An existing siding near Marlin was extended to handle 165-car trains.

As another phase of its project to speed up its service between Houston and Ft. Worth, the MP has entered into a joint operating agreement with the Missouri-Kansas-Texas under which MP will operate over the tracks of the Katy between Waco and Ft. Worth. Katy's route between the two points is shorter than the MP's by 11.5 miles. To implement the joint operating agreement, a connection, 0.7 miles long at Waco, and a connection 0.3 miles long at Ft. Worth, are being completed. ■

WATCHING **WASHINGTON** WITH WALTER TAFT

TAFT

CONGRESS IS BACK—Congress convenes on Jan. 10, but is not expected to get down to business until the principal Presidential messages are received, and Senate and House committees are organized. The principal Presidential messages are the State-of-the-Union and Budget messages and the annual Economic Report. Presidents have often indicated in these messages what transport legislation they might subsequently recommend.

In this connection, President Johnson's State-of-the-Union Message of a year ago sounded his first call for the subsequently-enacted legislation creating the Cabinet-level Department of Transportation. His Budget Message outlined the Administration's program for more adequate user charges on publicly-provided transportation facilities, which got nowhere last year. And his Economic Report was accompanied by the annual report of his Council of Economic Advisers which endorsed marginal-cost ratemaking, thus advising the President that the railroad industry's position on this controversial matter is economically sound. That meant, of course, that the Council thinks the ICC is wrong in holding that, in the absence of exceptional circumstances, fully-distributed cost is the proper identifier of the low-cost mode of transportation in a competitive rate situation.

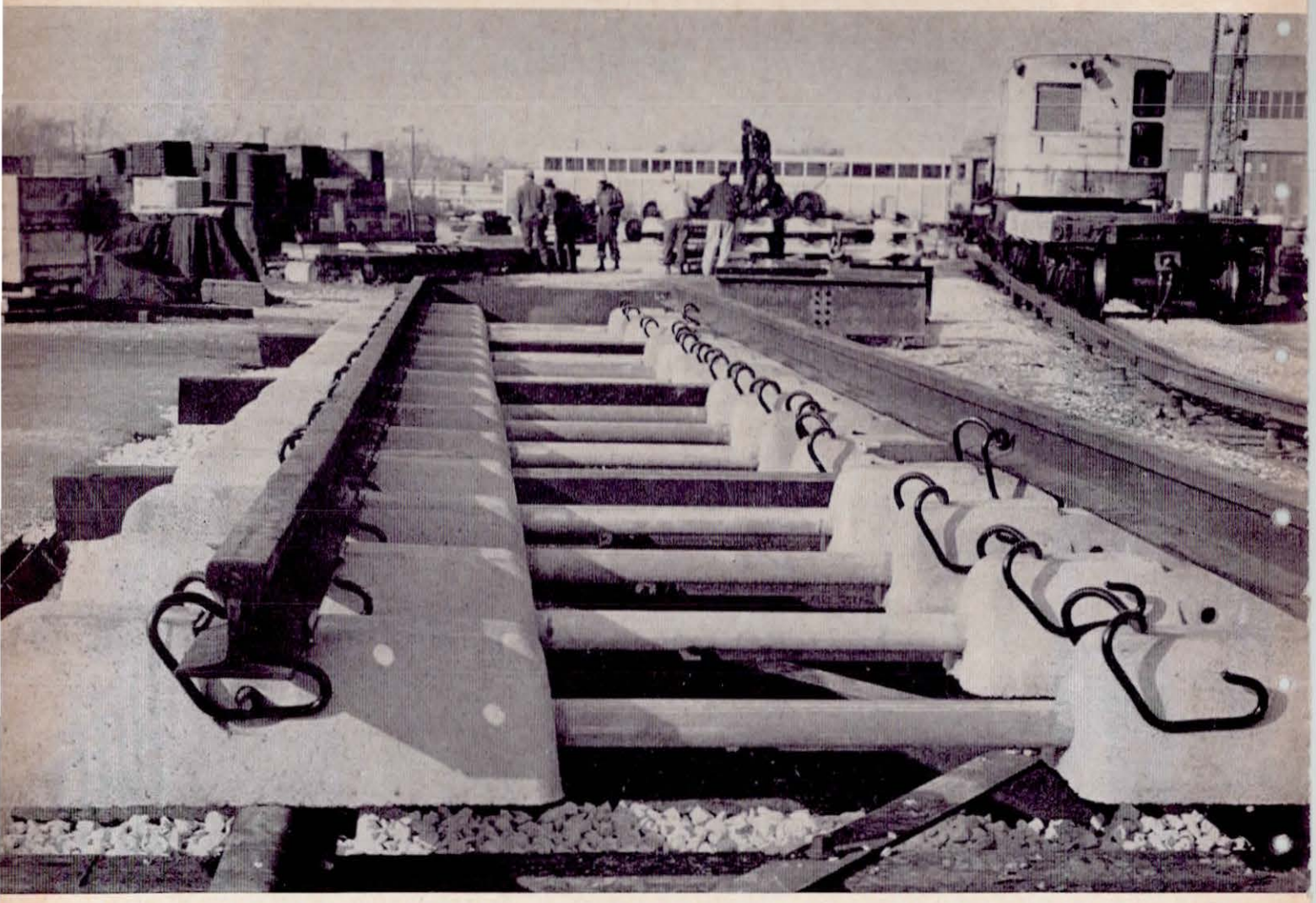
LBJ APT TO AWAIT BOYD ADVICE—This year, however, these Presidential messages may say nothing about Administration views on needed transport legislation. DOT is expected to be in business soon with Alan S. Boyd heading it as Secretary of Transportation. So, the President, naturally, will be disposed to defer making recommendations for transport legislation until Boyd has time to develop an Administration program. And Boyd has said he will be "very quiet and meek" for about a year while he gets the new Department organized.

The Act creating it provides that DOT will be in business 90 days after the Secretary of Transportation takes office—"or on such prior date as the President shall prescribe and publish in the Federal Register." The President was expected to submit Boyd's nomination to the Senate as soon as Congress convened, and the Senate Commerce Committee scheduled hearings for Jan. 11. Prompt confirmation is anticipated. While this would trigger the DOT Act's 90-day clause, the President will probably take advantage of the Federal-Register-publication provision to get the new Department functioning without that three-month delay.

IT'S A NEW CONGRESS—It's a new Congress, the 90th, which convenes on Jan. 10. So, all proposed legislation must start over in newly-introduced bills. The 89th Congress' adjournment last Oct. 22 brought death to all bills then pending.

As to getting the Congressional committees organized, there may be a fight about the chairmanship of the House Committee on Interstate and Foreign Commerce. That committee is now headed by Representative Harley O. Staggers (D.-W. Va.), but Representative John Bell Williams (D.-Miss.) has threatened to embark on an undertaking to supplant Staggers. Williams relies on his seniority (greater than that of Staggers), of which he was deprived by the House's Democratic Caucus for his 1964 support of the Republican Presidential candidate, Barry Goldwater.

VACANCIES ON ICC, NMB, AND RRB—In addition to that of Boyd and some 20 other Presidential appointees called for in the DOT Act, President Johnson will be called upon this year to make appointments filling vacancies on the ICC, National Mediation Board, and Railroad Retirement Board. At ICC, the terms of Commissioners Howard G. Freas and Abe McGregor Goff expired at the end of last year. Goff is seeking reappointment, but Freas did not. At NMB, the term of Leverett Edwards will expire June 30, and at RRB, the term of Howard W. Habermeyer will expire August 29. Goff has been a member of the ICC since 1958, Edwards has been on NMB since 1950, and Habermeyer has been RRB's "public" member and chairman since 1956.



SWEDISH TIES used by Chicago Transit Authority consist of two concrete blocks connected by a steel tube through which a steel rod is drawn. The pre-stressed rod is anchored at the outer ends of the concrete blocks by nuts and washers.

CTA tries new-type concrete crosstie

If tests work out, new tie may be used in future extensions.

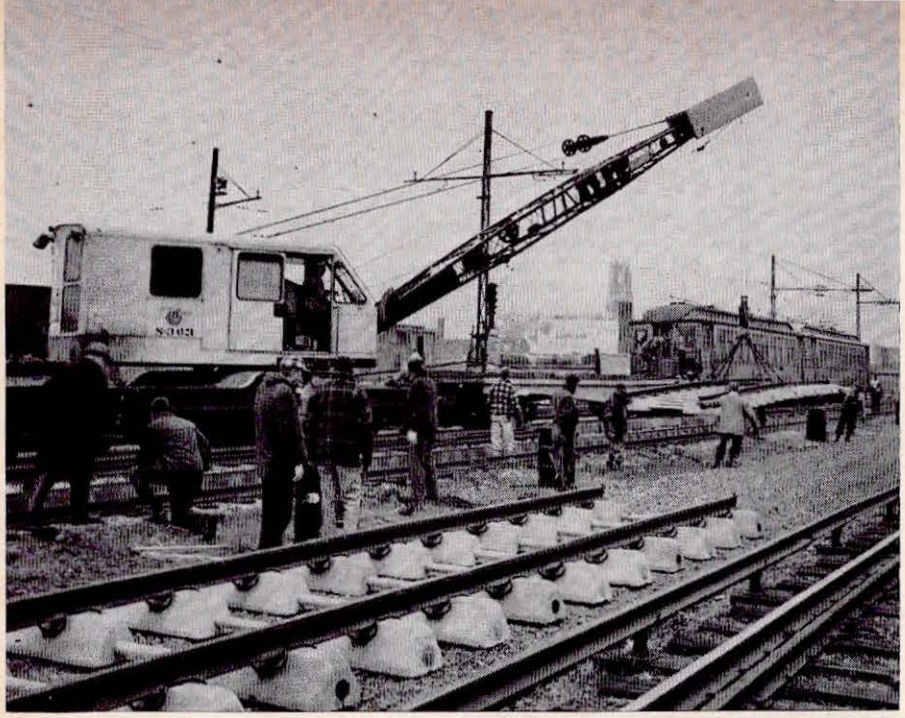
The first operating installation of concrete ties by a North American rapid-transit system has been completed. The installation is on the Chicago Transit Authority's north-south route between Berwyn and Bryn Mawr stations. Work was finished on Dec. 16, 1966, says Thomas B. O'Connor, CTA general manager.

• **Why concrete ties?** CTA's decision to test concrete ties was based on the scarcity and extended delivery date of good oak ties. Also, the life of concrete ties is presumed to be one and one-half times that of wood ties. In addition, O'Connor said the concrete ties will provide advantages for CTA riders. The advantages, he added, include a reduction in noise because of the sound-deadening qualities of a rubber pad and spring fastening included in the assembly.

CTA purchased 600 concrete ties from the Swedish Rail System, Stockholm, Sweden, at a cost of about $10,000 for the test installation on almost 1,500 feet of track. The Swedish tie consists of two concrete blocks joined by a concrete-filled steel tube. A pre-stressed rod of high-grade steel is drawn through the steel tube and is anchored at the outer ends of the concrete blocks by nuts and washers.

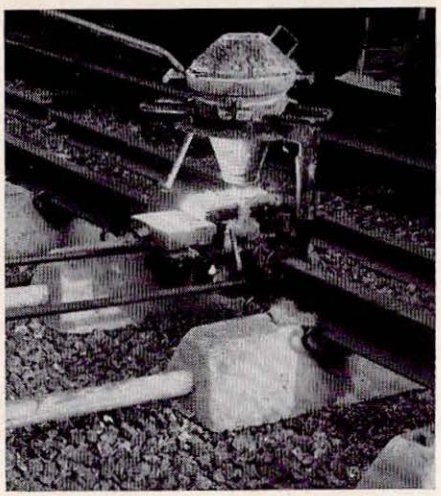
The rail fastening device, called the Fist fastener, consists of a spring clamp of high-grade steel bent into a special shape. The clamp hooks under an insulated pin that passes through a transverse hole in the concrete tie under the rail. The loop in the clamp bears against one side of the rail base and the two ends against the other base. This fastener is said to hold the rail against the concrete body with a constant vertical pressure of about 2.5 tons.

The Swedish concrete tie came to the attention of the CTA when its general superintendent of engineering, H. S. Anthon, visited European railroads. There he not only saw such ties being manufactured but he also observed many miles of track where concrete ties had been in service 10 years. It



PANEL METHOD was used in reconstruction of track. Existing ballast, in good condition, needed only to be smoothed. Holes in ends of every third tie are for attaching supports for third rail.

IN SWEDEN: Concrete-tie installation was demonstrated in Stockholm last summer for Railway Age Rail-Transit-Seminar group (including CTA's H. S. Anthon). Pictured are Allan Dell (left) of Baltimore's MTA and A. J. McGinnis, president of Simmons-Boardman Publishing Corp.



RAILS WERE WELDED together by Orgotherm process. When welding was completed, the rails were continuous over the required 37 track panels.

was felt that a test installation of the ties should be made so that their performance could be observed and compared with conventional wood ties. From time to time, extension of CTA lines has been proposed but no definite type of track construction has been decided upon. The performance of the concrete ties in this test installation may have some influence on the type of construction to be used on future lines. No. 3 track (numbered from west to east) of the Berwyn-Bryn Mawr section was selected for the test because the installation work could be accomplished without interference from trains. A crossover was installed on each side of the work site between No. 3 and No. 4 tracks. The regular "L"-subway service was maintained on No. 2 and No. 4 tracks of the four-track right of way. At the location where the test section was installed the CTA line is carried on an elevated ballast-deck structure.

● **Panel method used.** The track-construction technique consisted of assembling the ties, fastenings and rail into track panels at a shop location. The completed panels (37 were required) were transported to the work site, where they were laid in track sections.

The ties were mounted by a crew of five men to 90-lb rails at CTA's Skokie rapid-transit shops, using a template and a crane. Each panel has two 39-foot rails and 16 concrete ties. The latter are spaced 29¼ inches apart, compared with 24 inches for wood-tie spacing. A rubber pad was inserted between the rails and the concrete ties. Then the spring fastener was applied to clamp the rail to the ties.

On November 12 when work was begun on the construction of the track panels, No. 3 track was removed from service between Berwyn and Bryn Mawr stations. The existing rails on about 1,500 feet of track were disjointed and moved to the sides. The crossties were then inspected and sorted between usable and non-usable. All old material was loaded by a Speed Swing and an Austin-Western crane onto cars of a night work train and hauled away.

Existing ballast on this section of track was in good condition, so the crib ballast was smoothed and leveled off by using the bucket of a Caterpillar front-end loader.

● **Installing the panels.** After the first eight track panels, each weighing 9,000 lb, were assembled, they were loaded onto flatcars and hauled in a work train to the job site on November 19. The work train occupied No. 1 track. At 9:30 a.m., after the morning rush hours, an Orton diesel-powered locomotive crane began the job of unloading and setting the panels in line on the ground. This operation necessitated reaching over No. 2 track with the boom. Hence, flagmen were used on each side to protect the work.

An engineering party working in the vicinity was used to establish the correct line for the panels, as well as for setting grade stakes. As the panels were laid, rails were welded together, using the Orgotherm welding process. All eight panels were in place by 3:00 p.m., before the evening rush hours.

Some delay was experienced in assembling the track panels because of a lost shipment of tie pads. Also, because of demands made on the services of the crane, both at the panel-assembling layout and elsewhere, it was not until November 26 before the other 29 track panels could be taken out for laying.

The third rail was mounted on specially constructed treated-oak blocks. These blocks were bolted to one end of every third tie to support the 90-lb trolley rail.

When the paneled track had been connected to the existing track at each end, fresh ballast was unloaded and spread, then tamped by a Plasser tamper. ■

Transit P&S work heads into an era of growing complexity

All signs seem to point toward expanded use of data-processing equipment in every phase of the mass-transport purchasing job.

The chief purchasing officer for a mass-transportation agency appears to have all the problems that beset his brethren in the railroad industry. What differences there are in the jobs seem to add, not subtract, complications.

There are, for instance, these points to ponder:

—Transit-agency purchasing men, like other transit-agency officers, don't find that the non-profit, public-service aspects of their jobs make things any easier. They don't have stockholders in the usual sense, and perhaps their customers are more captive to the service than are customers of a railroad or a truck line. But the wise transit management runs the operation with as much intense concentration on efficiency as if it were a profit-making, private-enterprise business.

—Labor costs in a transit situation can be even more of a drain on revenues than they are in railroading, where labor takes 40 to 50 cents out of each incoming dollar. On Chicago Transit Authority, for example, total operating labor costs eat up almost 68.5 cents of the revenue dollar.

—Restrictions on non-bid buying are usually strict. Again, for example, on CTA bids are taken on all purchases, and advertised bidding is required on purchases (or property sales) amounting to $2,500 or more. In addition, there are statutory requirements for the purchasing agent to obtain authority first to advertise, then to buy or sell.

● **Transit buying—who and how.**—Handling the complicated job of buying and material-management for Chicago Transit Authority is a veteran in the business—G. S. Graybiel, general superintendent of purchases, specifications and stores. Graybiel has been with CTA and predecessor companies for some 23 years. He runs an operation which in 1965 spent about $21 million—and he has a number of ideas on the course of purchasing in a mass-transportation organization.

At the moment, CTA's chief purchasing officer is heading into a new year with several concerns—including one regarding the present advertised-bid restriction and another connected with the preservation and encouragement of competition among vendors.

The bid-restriction figure of $2,500 was established under the act of the Illinois Legislature which created CTA about two decades ago. It can't be changed without legislative action. And there are those who think it's now too low, in view of the increasingly complex nature of items being purchased and in view of the bare fact that prices have gone and are going up.

Under certain conditions—in emergencies—bid requirements may be bypassed. But CTA purchasing men are still of the opinion that a realistic look at the situation points to a need for a price ceiling of perhaps $5,000.

● **Two aspects to competition.**—As to competition, there's concern for both the buyer and the vendor. Transit men may realize that a single company could probably supply the nation's present annual needs for new city-type buses—but, as purchasing men, they aren't keen to have sources of supply so limited. Before World War II, there were a half-dozen or more companies bidding in the bus market. Now, CTA and other transit agencies find, essentially, two suppliers.

Graybiel and other CTA buyers are also watching competitive trends in other areas—and, though the rapid-transit market is growing steadily, they're not yet seeing any great influx of vendors anxious to get a slice of the business.

Not so many years ago, CTA was getting an average of five replies to each contract proposal. Now, it's getting an average of three. Several reasons for the decline might be cited—but the one closest to the point may simply be that times have been relatively good for many suppliers, and prosperity may have slowed their reflexes.

CTA, meantime, goes ahead with major buying programs. It is planning for rapid-transit extensions—and it has

Planning to spend the money

Chicago Transit Authority general superintendent of purchases, specifications and stores, G. S. Graybiel (seated, right), and the heads of his department's three sections. Left to right are R. L. Manville, superintendent of purchasing; G. H. Adams, superintendent of specifications; and J. T. Harty, superintendent of stores.

—Photo courtesy Northern Pacific Railway

They just don't build 'em like they used to.

Time was when one "horse-power" was about all a construction gang needed.

Not anymore. Railroading's changing so fast that even "modern" methods and equipment of just five years ago may be out of date today.

Compare on-track equipment with Caterpillar machines in jobs like maintaining roadways, cleaning ditches, repairing washouts, sloping cuts and restoring embankments to standard width. Availability of track-bound cranes and work cars is severely reduced as these units wait idly for revenue trains to clear.

Recently, a railroad studied a work train (five-man crew) and a locomotive crane (two-man crew) doing common excavation. They spent only 20 percent of their time in productive work. In effect, the railroad was spending $250 per day to move 200 cu. yd.—or $1.25 per yard.

This Cat No. 112F Motor Grader and D6 Tractor are lowering the subgrade on the main line of a midwestern railroad.

By contrast, a midwestern railroad uses a typical Cat-built spread (two D6B Tractors with bulldozers, two No. 60 Scrapers, a 977H track-type Loader and a No. 12E Motor Grader) to do similar work.

Hourly owning and operating costs for the spread, estimated by standard industry methods, are $37.93. Averaging 800 yards in a 6¼-hour workday, the cost per yard is 45¢, including the No. 12 for ditching and sloping and the 977 for cleanup.

Economies in operation like these are worth investigating—with your Caterpillar Dealer.

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Caterpillar

maintained a fairly consistent record of major expenditures for rail and street equipment.

• **CTA's organization.**—To handle the buying and material-management requirements of CTA, Graybiel has an organization of more than 150 people —most of them engaged in stores work at more than a dozen points.

Over the years, CTA has tended to centralize functions under the broad-shouldered, affable Graybiel. He was placed in charge of purchasing when CTA was formed; stores responsibility was added in 1954; and specifications came under his jurisdiction about two years ago.

Each of the three major sections has a superintendent and an assistant. The purchasing group also includes four buyers, and the specifications section has work for four engineers. One clerical staff serves all three parts of the department.

The specifications group, newest element in the P&S operation, is a particularly important one for CTA. For protection of both buyer and seller, in the framework within which CTA purchases, specs have to be exact—and the Authority now maintains about 3,000 individual specifications, based for the most part on ASTM and SAE specs, modified where necessary to suit CTA needs.

In a normal year, CTA will award about 20,000 contracts—and it will have contact with some 3,300 individual suppliers as successful and/or unsuccessful bidders.

Of these contracts, about 300 qualify as major—and account for approximately 75% of the dollars spent. In the division between advertised and non-advertised purchases, CTA records indicate that about 70% of its total transactions fall below the $2,500 limit —but even on these purchases, Graybiel and his staff buy through competitive bidding whenever possible.

• **Buying, CTA-style.** If a purchase is estimated to cost less than $100, placement may be handled over the telephone, with the buyer contacting the most advantageous suppliers. If the cost is figured at between $100 and $2,500, CTA will send out inquiries, set a sealed-bid date, then open the bids and award the contract. And on $2,500-and-up purchases, the department works with the Chicago Transit Board to get authority first to advertise and then to buy.

When it can, CTA tries to group its bid inquiries. A purchase of lamps, for example, may involve hundreds of separate items and many different types of lamps—and the award may be a single contract or several.

A number of other supplies—motor oil, lumber, bearings, among them—are handled in similiar fashion.

On oils, the Authority will use one ad but it may require several kinds of packaging and five or six grades. Delivery methods are also specified. Then, normally, CTA will weigh all factors and take the over-all proposal which works out to be most economical.

On lumber, there's one grouping—but split contracts may be awarded. Again, it's a choice for the buyers between splitting the award or taking a bid which a supplier may submit on an all-or-nothing basis. Over-all economy governs.

On bearings, CTA buys by brand name, under one ad which spells out brand requirements. As many contracts as are required are entered into (though CTA will order a given brand from only a single supplier).

• **What's ahead?** For the future, CTA men tend to believe that all phases of the purchasing, material-management and specifications operation will become more complex and more sophisticated. The Authority, for example, is now heading into an expanded use of data-processing equipment in purchasing. Upward pressures from labor costs, on CTA as on other systems, will continue to make maximum efficiency a primary goal. Finally, the growth and development of mass-transportation agencies all over the U.S. and Canada may produce a new wave of supply-industry interest in the industry. Graybiel and the people he has working with him are looking forward to it all. ■

P&S work attains "new stature"

There's a big job ahead for purchasing men in the rapid-transit field—not just in doing the job but also in making sure that training programs turn out qualified people for tasks that will increase in complexity.

G. S. Graybiel, general superintendent of purchases, specifications and stores for Chicago Transit Authority, recently gave the American Transit Association a look at his views on both the job and the people. These were among his points:

"At one time, perhaps not too far in the past, purchasing and material-handling was just one of the necessary clerical details in the operation of a business. Today, this is not the case. The work performed by these people has been given a new stature. Duties and responsibilities have been broadened. Likewise, the personnel qualifications to fill these positions have become more strict and demanding.

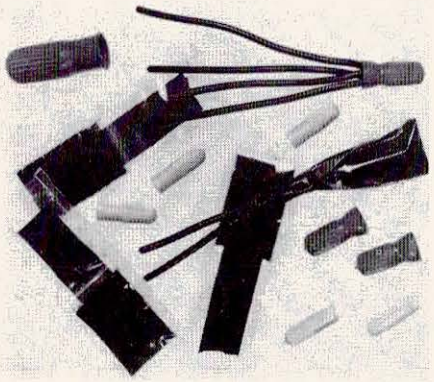
"During the past few decades, the qualification requisites for P&S people have been too general, even leaning in some cases quite heavily to the clerical side. In recent years, at present and even more so in the 1970s, qualifications to fill these positions are going to be much more demanding of educational background, ability and skill.

"During the past several years, we in Chicago have been working closely with our employment and training departments, scheduling into our own sections trainees from our company pool who, in practically all cases, are college graduates. This not only gives them an opportunity to learn our work and responsibilities but, equally as important, also gives us a chance to get a good idea of their capabilities and future potential as employees of the P&S division of the operation. It is from this group of people that we hope to select and develop our future administrative people to effectively carry on this work. The basic concept of assigning the work to those best qualified to perform is still essential."

And his word of advice to P&S men in the transit industry?

"In the future, utilize all the facilities at your command—and in some cases you may have to acquire some that are now beyond your reach—to see that P&S people apply diligently the techniques of skill necessary to accomplish results that are greatly contributable and readily recognizable in your company's operations. Further, see that the 'man of tomorrow' is becoming a part of your operating personnel, that he has the qualifications to develop the skills necessary in the efficient performance of P&S duties as required in a faster-moving, greater - skill - demanding world."

NEW PRODUCTS REPORT

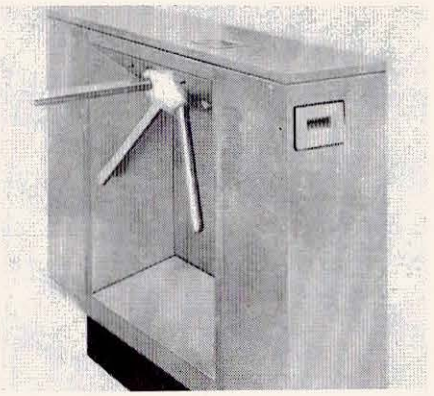


Connectors (RA-1)

Moisture proof electrical circuit connections now are possible with the use of a new connector pack. Called Scotchlok brand connector sealing pack, it consists of 10 Scotchlok connectors, type Y, R, or B; 10 small Unipak containers of epoxy resin in a plastic bag, and 10 short pieces of electrical tape.

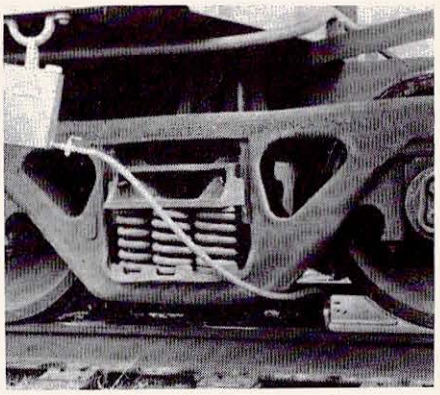
To use the pack, a splice is made with a Scotchlok connector, and then inserted into the resin-filled bag. The bag is sealed with the tape. The resin cures within minutes forming a sealed connection, mechanically protected and resistant to water, petroleum solvents, weather, lubricating oils, salt solutions, some acids, corrosion, galvanic action and gasoline, according to 3M. The two-part resin is mixed right in the special Unipak container.

Materials used in the pack include Scotchlok brand electrical spring connectors, Scotchcast brand electrical resin, and Scotch brand electrical tape No. 33. Pack No. 3576 contains type Y Scotchloks for 18-12 AWG wire; pack No. 3577, type R for 16-10 AWG wire, and pack No. 3578, type B for 12-6 AWG wire. *3M Company.*



Turnstile (RA-2)

The Centurion, a fully reversible turnstile, can operate with the following characteristics in either direction: free rotation, locked against rotation and electrically controlled. An electrical impulse operates the turnstile by unlocking the device and permitting one passage at a time. The impulse may be initiated by coin, magnetically encoded ticket, dollar bill, pushbutton or the gate operator. *Advance Data Systems Division, Litton Industries.*



Wrecking Skids (RA-3)

Cars or diesels which fail in mainline service can be cut out and moved on lubricated wrecking skids without need of wrecking crew, according to skid manufacturer. Skids, in sets of two, can be placed either in front of, or between car trucks, depending upon direction of travel. Skids are lubricated by controlled gravity-fed application of oil to rail head directly in front of oncoming skids from reservoir attached to car or diesel. *Aldon Co.*

Static Inverter (RA-4)

A new static inverter produces regulated, well filtered, sine wave AC power from a DC source. The Fansteel instantaneous transfer (battery isolated) system is as follows: The main AC line power is fed through the inverter to the load. The inverter is always in operation. The battery supplies power to the inverter if the AC line voltage dips or fails. The switching from AC input to battery input is instantaneous. AC power to the load does not experience even a dip in voltage. This instantaneous switching is accomplished because power stored in the inverter is used during the extremely small amount of time required for the input currents to change directions.

DC inputs are 21-28, 42-56, 105-140, and 210-280 volts. AC input is 113-130 volts, single phase. AC output is 118 volts RMS sine wave, 60 cycles per second, ±1% after 15-minute warm up. Efficiency is 75-80% at full load (DC input) and 60-65% at full load (AC input). AC outputs in various models range from 0.120 to 10.0 kilovolt amperes. *Fansteel Metallurgical Corp.*

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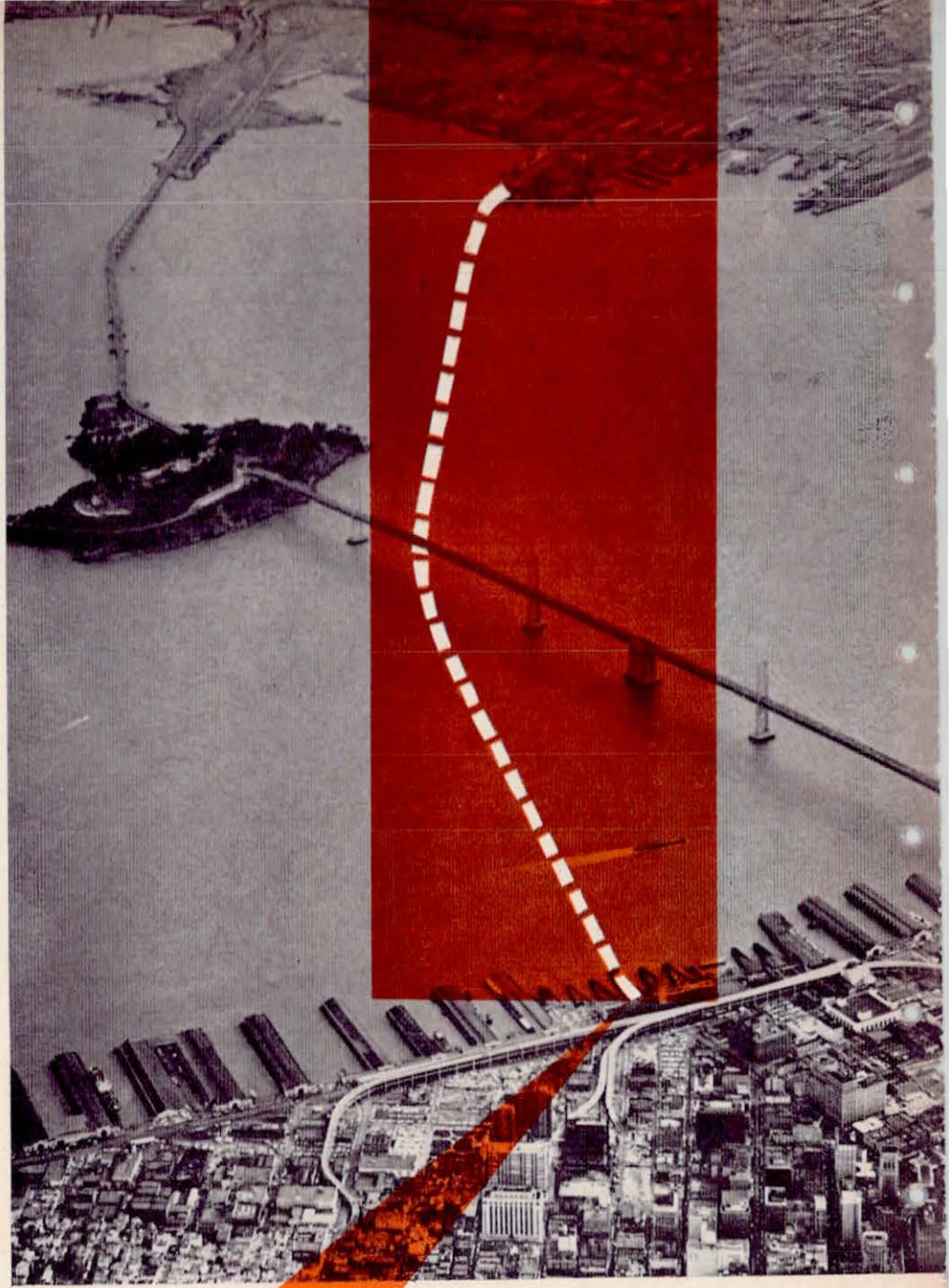
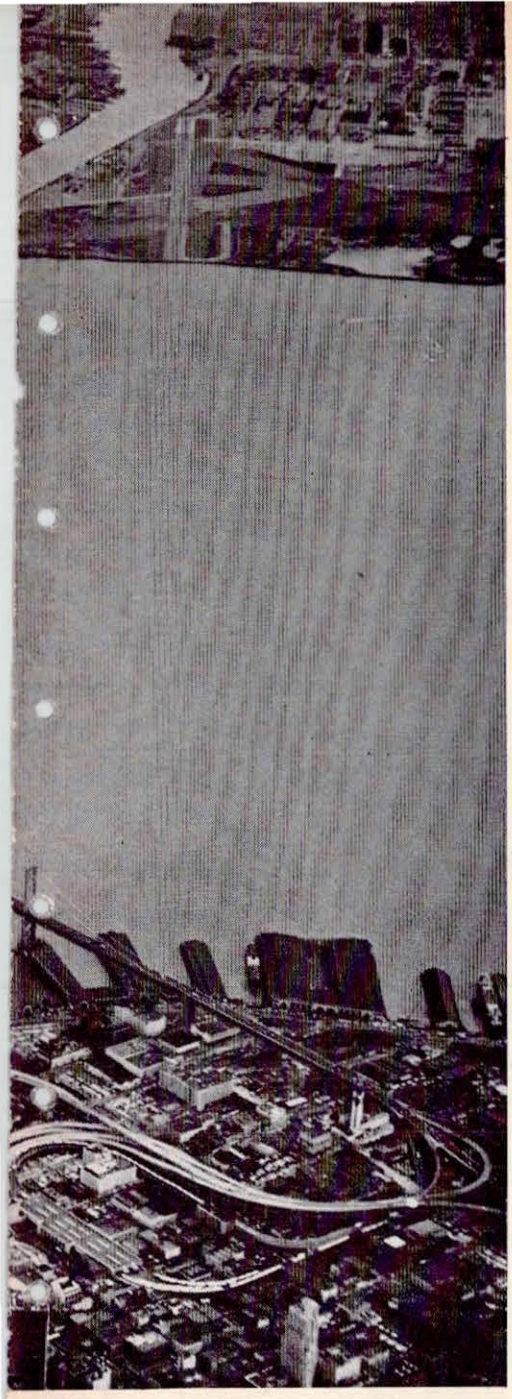


ONE MORE 'BAY BRIDGE': Keystone of San Francisco's $1-billion transit system will be four-mile Trans-Bay Tube, begun by BART last year. Work moves into high gear this year.

Transit turns a corner in '67

By JOE ASHER



The war in Vietnam is causing the Congress and the Administration to pare down quite a few urban spending programs. But mass transit won't be one of them.

That's the big news out of Washington for the transit industry, as industry leaders get set for 1967. The year will be a good one in many ways: capital spending on existing systems for new lines and equipment is at a relativey high level, and several new systems are approaching the construction stage. The nagging fact remains, however, that a lot more cash is needed to do all the jobs that have to be done. And one source of supply of that cash might well have been cut off, in view of the unsettled state of world affairs.

• **Reprieve.** That source is the Federal assistance provided under the 1964 Urban Mass Transportation Act, renewed last summer by Congress through fiscal 1968. As is well known, money authorizations from Congress are one thing, and the follow-up appropriations are something else again.

Vietnam was the prime source of worry. Many urban programs designed to appeal to the big-city vote have already gone under the knife, or are slated for surgery in the near future. The Anti-Poverty program, the Demonstration Cities program, the Job Corps, the Department of Housing and Urban Development's straight housing programs, are all being hit.

The transit-assistance program, also under HUD's wing, could easily have gone on the same chopping block. It lacks sex appeal for the public at large, lacks vote appeal for rural congressmen, lacks juggernaut lobbying machinery in Washington.

• **Modesty triumphs.** But the modest size of the transit allotment—$150 million apiece in fiscal 1967 and 1968—may have been its salvation. The level of aid to transit continues to disappoint industry leaders, but at least it is not in immediate danger of being cut off.

HUD officials expressed confidence that the aid program would emerge intact from the budgetary wars: They're currently working on a program level of $139 million. This sum, minus contingency money, will fund all transit-aid activities, including capital grants, demonstration grants, plus extra activities added to the program under the 1966 Act.

Some of these added activities have direct bearing on the new systems that are getting closer to the digging stage. HUD just approved a $369,000 grant to the Metropolitan Atlanta Transit Authority, the agency created to build a rapid transit system in Georgia's capital. The grant will be matched by $184,000 in local funds, and the total sum will be used to step up local planning.

• **Where the feds fit in.** The HUD grant was a Technical Studies Program grant, the first to be made under Section 9 of the new transit law, and Charles M. Haar, Assistant Secretary for Metropolitan Development, explained its import:

"The basic purpose is to bridge the gap between federally assisted transportation planning of an overall nature, and federally assisted capital improvements in mass transportation facilities and equipment, by providing funds for preliminary functional studies of basic need, priority and engineering and economic feasibility."

In the case of Atlanta, the grant will cover preliminary engineering and planning studies of an east-west line, extensions of the projected north-south line, corridor impact studies, and study of the impact on the present bus operator, Atlanta Transit System.

Parsons, Brinckerhoff, Quade & Douglas, which first recommended an Atlanta rapid transit system in 1962, is currently updating that study. MARTA General Manager H. L. Stuart estimated that the first two lines of the new system will cost about $310 million to build, and that the full 66-mile system ultimately envisioned would cost about $437 million. It's believed that by 1968, a bond issue for the bulk of the construction money can be presented to the voters.

Meanwhile, Georgia's Governor Carl Sanders announced he will request an appropriation of $500,000 over the next two fiscal years, as the state's initial contribution toward building the system. In last November's election, a constitutional amendment was approved, authorizing the state to meet up to 10% of the total construction cost. The $500,000 soon to be raised would match further federal contributions of $2 million, and would be used for final design work and some acquisition of rights of way.

• **Seattle.** The same kind of grant to "fill the gap" may help Seattle, where DeLeuw, Cather last year recommended a $171 million system. The city was hard pressed for funds to continue design and evaluation work, but the new HUD program may help. In the meantime, Seattle officials commissioned two architectural firms to evolve visual design concepts for the projected system.

Later this year, Parsons Brinckerhoff Quade & Douglas will issue its feasibility report on a proposed transit system for Pittsburgh. All signs point to a favorable recommendation, and officials of Port Authority of Allegheny County have been vocal in calling for such a development. HUD officials are evaluating the results of Westinghouse Electric's Skybus in the South Park project, as one possible alternative.

• **Los Angeles.** The long-talked-of Los Angeles transit system is getting closer to the action stage. Last year, the state legislature authorized use of $3.9 million in tideland oil funds for transit planning; $2.6 million of the money was awarded by Southern California Rapid Transit District in contracts for engineering and traffic studies.

Kaiser Engineers and Daniel, Mann, Johnson and Mendenhall are the SCRTD's new joint-venture consultants, with Coverdale & Colpitts appointed to do the traffic studies. As in Atlanta, SCRTD is aiming for a refer-

(Continued on page 44)

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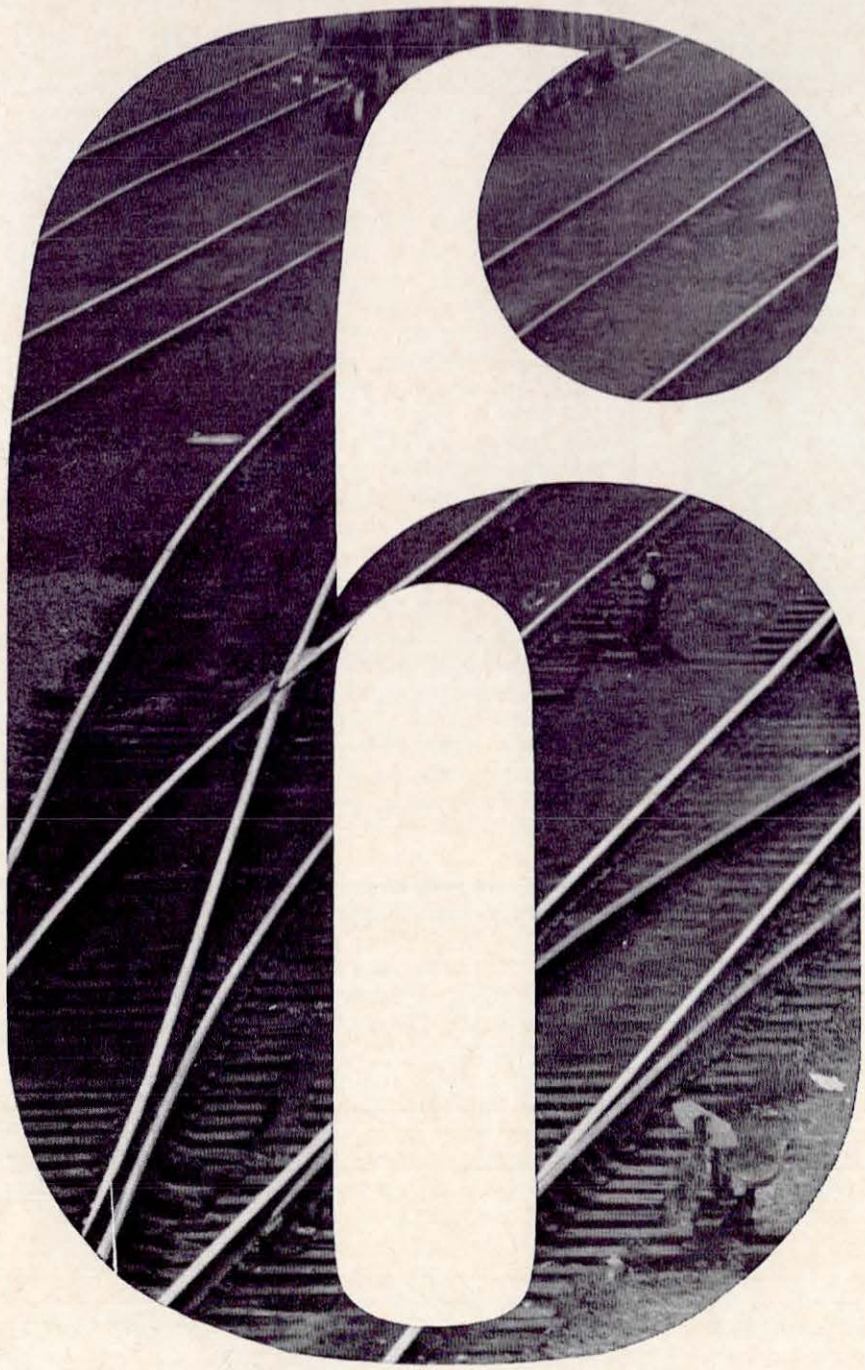


Circle 16 on reader service card

MARKET OUTLOOK

Carloadings

Loadings of revenue freight for the week ended Dec. 31 were not available as this issue went to press.

PIGGYBACK CARLOADINGS.—U.S. piggyback loadings for the week ended Dec. 24 totaled 20,562 cars, carrying 33,247 trailers, compared with 16,456 cars, carrying 26,287 trailers, in the corresponding 1965 week. Loadings for 1966 up to Dec. 24 totaled 1,145,785 cars, carrying 1,884,879 trailers, compared with 1,018,383 cars, carrying 1,643,903 trailers, in the corresponding period of 1965.

IN CANADA—Carloadings for the seven-day period ended Dec. 14 totaled 73,253 cars compared with 73,841 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Dec. 14, 1966....	73,253	25,762
Dec. 14, 1965....	76,964	23,583
Cumulative Totals		
Dec. 14, 1966....	3,877,733	1,201,956
Dec. 14, 1965....	3,810,564	1,196,246

NP plans record spending in '67

Northern Pacific's continuing program to improve equipment and facilities will move ahead in high gear this year with a record $45 million budgeted for 1967.

NP plans to buy 16 new 3,600-hp diesel-electric locomotives; spend about $21 million for 1,137 freight cars; install a 645-mile extension of its microwave system between Fargo, N.D., and Laurel, Mont., at a cost of approximately $2.5 million; relay track on main and branch lines at a cost of $7.1 million; and spend another $2.7 million for signal and interlocking plants.

NP expects a good traffic year ahead, with a substantial increase in wheat movements. The good crop years are also likely to cause an increased movement of manufactured and miscellaneous items in 1967, say NP officers.

FREIGHT TRAIN CARS

► *Pittsburgh & Lake Erie.*—Will place orders in 1967 for approximately 500 gondola cars. P&LE will also continue a major rebuilding program at its McKees Rocks, Pa., shops. This will involve the stretching of 750 narrow-door, 40-ft box cars into wide-door, 50-ft cars.

► *Orders Increase.*—Orders for new freight cars totaled 6,251 in November, compared with 6,173 in October and 7,570 in November 1965. Deliveries of new freight cars totaled 7,368 in November, compared with 7,738 in October and 6,980 in November 1965. Backlog of new cars on order and undelivered on Dec. 1 showed 12,656 in railroad shops and 43,781 in the shops of contract car builders for a total of 56,437, an increase of 14,348 cars, or 34% over the year-ago figure. The number of cars scheduled for rebuilding on Dec. 1 totaled 9,355, compared with 10,924 on Nov. 1, 1966, and 7,520 on Dec. 1, 1965.

PIGGYBACK

► *Missouri Pacific.*—Subsidiaries Missouri Pacific Truck Lines and Texas & Pacific Motor Transport will purchase 195 units of highway equipment at a cost of more than $1.5 million. On the list are 87 trailers of varying sizes; 56 city pick-up-and-delivery trucks; and 52 diesel- and gasoline-powered tractors, including four which will be equipped for piggyback loading-unloading operations.

PASSENGER CARS

► *Cleveland Transit System.*—Awarded the subcontract for trucks for 20 cars Pullman-Standard is building to LFM-Atchison Division of Rockwell Manufacturing Co. Pullman-Standard will deliver cars in the fall of 1967.

CAPITAL EXPENDITURES

► *Santa Fe.*—Capital improvement plans for 1967 include: acquisition of approximately 2,750 new freight cars, 15 2,800-3,000 hp dual-service diesel locomotives, and 25 semi-lightweight passenger cars; additional installations of mobile radio and base station equipment, along with 10 new hot-box detectors; installation of a company-owned plant at Newton, Kan., to extend direct dialing in that area; renewal of more than 200 track miles of rail in main tracks with new welded rail and 55 miles in secondary and branch lines with reconditioned welded rail; provision of facilities at Corwith (Chicago) for servicing refrigerated trailers; construction of new freight warehouse facilities at Commerce and Emeryville, Calif.; provision of new TOFC facilities at Albuquerque, New Mex.; construction of additional trackage at yards in Evadale, Tex., Clovis, New Mex., and La Mirado, Calif.

NEW FACILITIES

► *Pennsylvania.*—Is now placing in service a total of 1,310 solid state Motran radio units made by Motorola Inc., on mainline locomotives as part of its program of replacing inductive train-phones with two-way radio equipment.

YOU OUGHT TO KNOW

Freas retired from ICC: Howard G. Freas, whose service on the ICC was longer than that of his ten associates, retired Dec. 30. He was one of the Commission's Republican members, having been appointed in 1953 by former President Eisenhower. His letter of resignation went to President Johnson last Nov. 10. It was not until Jan. 3 that the White House released the President's reply formally accepting the resignation "with reluctance." The President added: "Your dedication and long service both with the Interstate Commerce Commission and the California State Public Utilities Commission, have made your service extremely valuable. You take with you my gratitude and that of your country."

ICC moves fast in probe: The ICC will hold public hearings Jan. 11 at Everett, Mass., to investigate the Dec. 23 accident in which a Boston & Maine commuter train rammed into a stalled fuel-oil truck at a grade crossing in Everett. Twelve persons died in the accident and at least 18 others were injured. The Commission's investigation is a formal one, docketed as Ex Parte No. 254, and the hearings will be conducted by Examiner Robert R. Boyd.

New Magnus president: John A. Mardick has been named president of Magnus Metal Corp. and general manager of Magnus Metal Division with headquarters in New York City. He succeeds as president B. H. Sullivan, Jr., who died Dec. 19 at his home in Chicago. Mardick has been with the company since 1948, joining the firm as a metallurgist in the Brooklyn Research laboratories. He was made production manager of Magnus Metal Division in 1957, and general production manager in 1965.

CIT League to meet in Montreal: February 21-23 are the dates for the 1967 annual meeting of the Canadian Industrial Traffic League. Montreal's Queen Elizabeth Hotel is the place. The program includes two business sessions on the mornings of Feb. 21 and 22; membership seminars on physical distribution on the afternoons of the same days, and an all-day conference on transportation labor and transportation legislation on the 23rd, followed by the League's annual dinner that evening. Other program items include the regular air cargo luncheon and Canadian Port Committee breakfast, and railroad and motor carrier receptions.

MoPac beefing up truck lines: Missouri Pacific plans to spend more than $1.5 million for new tractors, trailers and trucks for its two highway subsidiaries, Missouri Pacific Truck Lines and Texas & Pacific Motor Transport. The order will include 56 city pick-up-and-delivery trucks, 48 diesel and gasoline tractors and 4 tractors equipped to load trailers on flat cars, and 87 trailers of varying sizes for piggyback, over-the-highway and local service. MoPac previously revealed plans to spend over $50 million for railroad improvements and equipment.

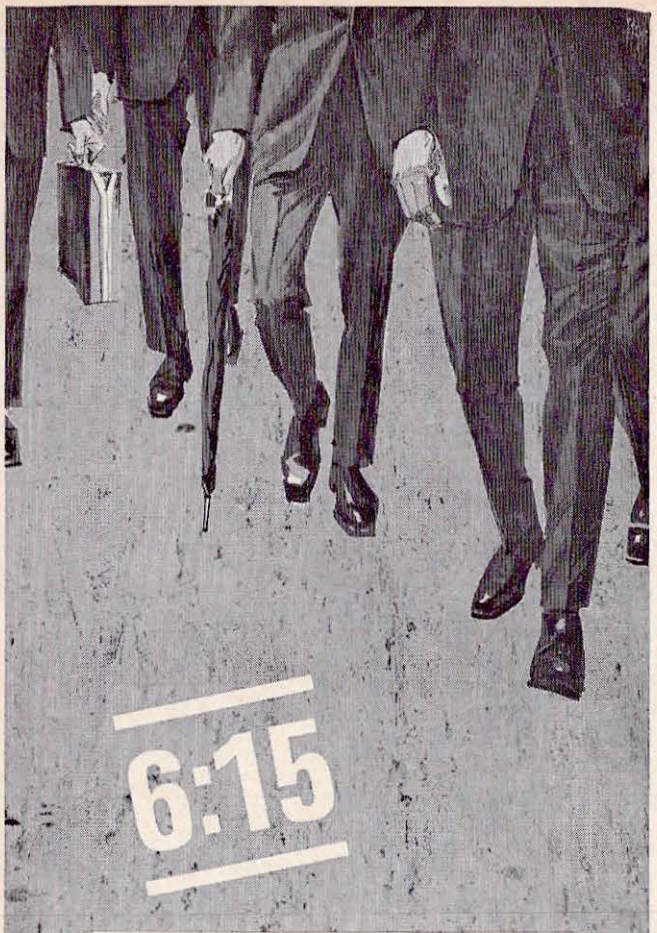
Tunneling breakthrough? Despite tight money, inflation, and cutbacks in federal spending, the outlook for tunneling remains a bright spot in the construction industry, says William L. Wearly, executive vice president of Ingersoll-Rand. Wearly has two predictions: (1) Spending for highway and railroad tunnels, which totaled about $100 million in 1966, should grow about 12% to 15% a year in the next three years; and (2) "We may soon build intercity railroad systems completely underground because of lower tunneling costs." Ingersoll-Rand is a supplier of tunnel drilling and boring equipment.

AAR to RPI: "Thanks": The Association of American Railroads has adopted a resolution of "thanks and appreciation" to the Railway Progress Institute for the RPI's "present strong efforts to point up the vitality, modernity and essentiality of the railroads."

Truck tonnage: Intercity truck tonnage in the week ended December 24 was 11.1% below that of the previous week, and 14.8% above the volume in the corresponding week of 1965, according to American Trucking Associations.

Current statistics

Net Income	
9 mos., 1966	$658,000,000
9 mos., 1965	542,000,000
Carloadings, revenue freight	
48 wks., 1966	27,565,659
48 wks., 1965	27,201,717
Freight cars on order	
Dec. 1, 1966	56,437
Dec. 1, 1965	42,089
Freight cars delivered	
11 mos., 1966	81,849
11 mos., 1965	70,110
Serviceable cars	
Dec. 1, 1966	1,420,553
Dec. 1, 1965	1,397,160



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Transit turns a corner in '67

(Continued from page 39)

endum on a bond issue in Nov. 1968. Probable amount: $900 million.

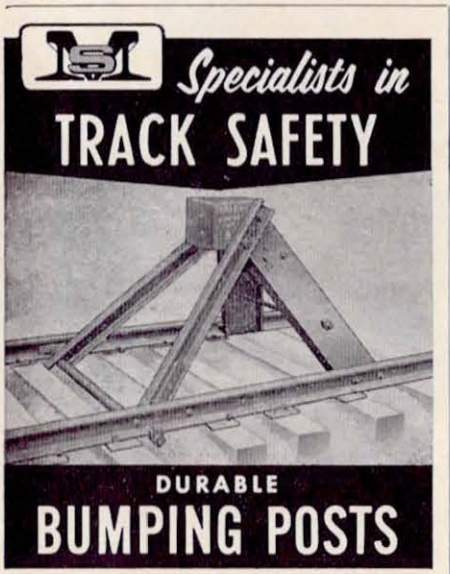
• **San Francisco.** Further up the west coast, Bay Area Rapid Transit officials announced they will double the pace of construction in 1967 over last year.

They plan to award new contracts totaling about $300 million during 1967, with all but $50 million of that sum to be committed before July.

Contracts already let account for over $250 million of the $1.2 billion BART will spend to build the 75-mile system; these cover the building of 34 miles of the network, and another 24 miles will be started in 1967.

Some $50 million in equipment contracts are to be awarded this year, including those for automatic train control, automatic fare collection, and some part of the 450 car fleet BART will eventually have.

The most complex construction aspect of the job is building the four-mile Trans-Bay Tube, and that is now under way.



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• **Washington, D.C.** In the nation's capital, the newly-formed Metropolitan Area Transit Authority replaced temporary chairman Brig. Gen. Charles Duke with Walter Tobriner, president of the District Board of Commissioners. The agency will continue the work of detailed design of the coming Washington system begun by the National Capital Transportation Agency.

• **New York.** The car-replacement program of the New York City Transit Authority will continue in high gear in '67: On the heels of a 200-car order from General Steel Industries came a 400-car order from the same builder.

Deliveries of the new cars are to begin late this year; they are to be of composite construction and of completely different design.

• **Boston.** The Massachusetts Bay Transportation Authority held groundbreaking ceremonies last year for two important projects: A new Charlestown tunnel and a new Neponset River bridge. Work is progressing on four different line extensions, a station modernization program, and the criteria for the new rolling stock that will be needed—all outlined in last year's $369 million master plan.

• **Philadelphia.** The Southeastern Pennsylvania Transportation Authority's efforts to take over the Philadelphia Transportation Co. remain stymied in the courts. As long as this situation continues, plans for upgrading subway equipment and facilities will be uncertain.

Meanwhile, SEPTA and Philadelphia city agencies are going ahead with those aspects of the $460 million ten-year master plan that involve suburban rail service. Twenty stainless steel cars will be delivered by General Steel Industries.

The newly elected Governor, Raymond Shafer, indicated he will press for increased state aid to transit in the major urban centers.

The Delaware River Port Authority has contracts let for about half the $73 million cost of the coming 14-mile line. DRPA officials hope to have it in service by mid-1968.

• **Cleveland.** Late this summer, Cleveland Transit System will take delivery of 20 air-conditioned cars, built for $3.4 million by Pullman-Standard for the airport extension.

It was already reported that CTS is interested in the potential of container movement by rail to the airport; CTS officials are now looking into the possibilities of selling air rights at rapid transit stops. Six developers were invited to bid on air rights at Windermere station, and the idea may be extended to other stations.

• **PATH.** Port Authority Trans-Hudson Corp. has taken delivery of 44 more air-conditioned cars from General Steel Industries. The cars are needed to accommodate extra traffic when the Aldene Plan goes into operation later this year.

As an added inducement, PATH riders will be given a reduced fare of 30 cents between Newark and Manhattan, in place of the present 40 cents.

Officials of the Chicago Transit Authority are closely following tests of concrete ties (see p. 32). CTA also plans to spend $1.5 million this year on new rapid transit offices, also escalators, terminal facilities and shops.

• **Canada.** North of the border, Toronto doubled its route mileage during 1966, with the opening of the eight-mile Bloor-Danforth line last spring. A further six miles are under construction.

Montreal's brand-new Metro, opened this past October, has proved a winner. The Montreal Transportation Commission report that total transit riding is up by 10%, and that the new Metro is attracting 350,000 riders daily. An additional line to the south shore of the St. Lawrence River will be open this spring, in time for Expo 67.

Operating trials have been going on for some time with vehicles of the Expo Express, the special trains that will serve the fair grounds in Montreal.

• **Equipment outlook.** Car orders have in recent times held to the level of 500-700 cars a year, with the biggest single factor being the replacement of prewar New York subway cars. It's generally been conceded that this market will expand over the long term, but a number of factors indicate that the upward curve will begin before long.

One is the commuter car market. A Commerce Department study pegged the potential commuter car market in the next five years at 1,700 vehicles, at a cost of $360-$375 million.

On the strictly transit side, there are a number of systems that are sure bets for orders in the short term: San Francisco's BART (450 cars this year); New York's NYCTA (200-400 cars yearly); Boston's MBTA (up to 200 cars in the next two years); Philadelphia's projected combination of SEPTA and PTC (80-200 cars in the next three years).

Washington is close to building, and that may mean 184-210 cars; Atlanta is not far behind, which means 160 cars; Los Angeles could bring in another 400 cars, Pittsburgh another 100-175; Baltimore 175 cars and Seattle 160 cars. The long-term outlook is for another 25-40 cities to join the column. ■

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VIEWPOINT

A near miss—and another try

Organized labor may well be apprehensive about the makeup and the inclinations of the new Congress. If union leaders believed everything they read, they might consider going into hibernation for the next two years.

In all honesty, this new Congress doesn't seem to shape up as a union lobbyist's best friend. But the organizations long ago learned that (a) they can get a certain amount of what they want from almost any Congress, and (b) there are definite advantages in staying on the offensive, if only to keep opposing forces off balance.

Rail unions didn't really do badly in the deliberations of the past Congress. They got Railway Labor Act amendments affecting National Railroad Adjustment Board procedures and awards. And they got supplemental-pension legislation, with bipartisan (which is to say union and management) support. Neither of these accomplishments, however, came as a surprise. The shocker—if a near-miss can be called that—was the measure of success a lone union had in pushing another bill, against industry opposition and in the face of apathy or outright opposition from other unions.

Slim support for the bill, but still . . .

The Brotherhood of Locomotive Firemen & Enginemen didn't triumph in its drive for amendments to the Hours-of-Service Act. But it came close enough to throw a scare into management ranks. And it vows that the new Congress will be the subject of another Hours-of-Service pitch. As the Firemen see it, they weren't beaten.

To some observers, certain of the circumstances attending the BLF&E legislative drive last year were little short of amazing.

For one thing, this was almost exclusively a BLF&E bill. One other operating organization gave a measure of support, but two of the ops—including the giant Brotherhood of Railroad Trainmen—sat it out. The Brotherhood of Locomotive Engineers was flatly opposed, and said so. The non-ops, representatives of a sizeable majority of railroad employees, were hardly involved (with the exception of one union which gave backing to one section of the bill where its interests were directly concerned).

The BLF&E bill, essentially, called for changes in the Act to reduce the train-crew hours-of-service maximum from 16-hours-in-24 to 12-in-24, or 9-in-24 for engineers working without firemen.

The railroads didn't seem overly concerned about the Firemen's Hours-of-Service drive, at first. Logic appeared to be on the industry's side. For instance, it could be demonstrated that train crews work, on the average, much less than 40 hours per week. It could be said that while the maximum time on duty is 16 hours in 24, the average is less than eight hours. It could be pointed out that the 16-in-24 provision is needed to cover extraordinary conditions. It could be proved that the BLF&E amendment would hurt railroads, their employees and their customers.

The employee: Where is his interest?

Still, the BLF&E kept plugging away—and gaining ground. At one point, so it's said, there was talk of offering a compromise. And there were some in management who, so it's also said, would have gone for compromise—figuring the cause of opposition was probably lost and preferring a truce to total defeat.

Well, opinion of a firmer sort prevailed, proposals to compromise with the BLF&E were rejected, and the bill finally died. But the Firemen were vastly encouraged. Says their national legislative representative: "We will be back again . . . we shall be successful next time."

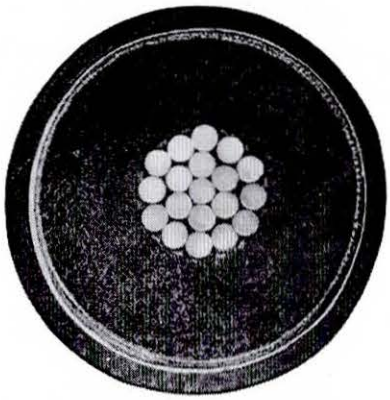
How can the industry fight back? Perhaps by pointing out to the individual employee that the Hours-of-Service amendments are demonstrably pro-union and anti-employee. Sure, they're anti-management and, in a sense, anti-customer in terms of costs. But labor-relations or personnel managers can also show that the 12-in-24 proposal will work to the definite, specific disadvantage of many operating employees, in terms of take-home pay and time away from home.

Railroad men have a habit of nodding sagely, gravely, when somebody says "our employees are our most important asset." In the Hours-of-Service fight, operating employees—were they adequately and accurately informed as to what the fight means to them individually—could be "assets" of a most important dual nature. In opposing hours-on-duty cutbacks, they'd be valuable allies of their employers—and they'd be doing themselves a favor.

on guard

This is an enlarged photograph of the end of a pencil. Graphite is ideal for writing (its name even means "to write"), but it is soft and needs protection. Hence the invention of the pencil. Because of man's propensity for making mistakes, no pencil is considered complete without an added invention—the eraser.

Below is a cross-section of a cable. Copper is an ideal carrier, but it needs protection. Hence the invention of Kerite. Nobody has ever made a mistake in specifying Kerite; it has been proved in service for 40, 50, even 60 years. A Kerite cable does not call for erasers. The Kerite Company, 30 Church St., New York, N. Y. 10007.



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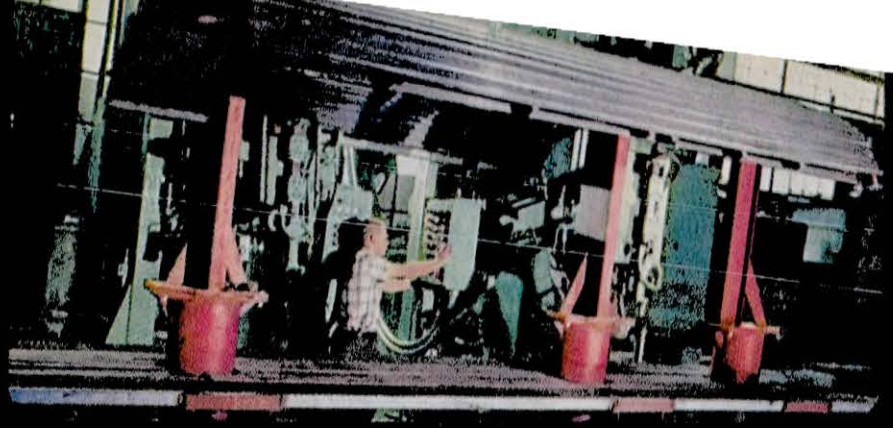

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